

The National Locksmith®

\$5.00

CODES
CORBIN AUE 1-700
page 130

September 1997
Volume 68, No. 9

Safes from the antique to the...

**NEXT
GENERATION
IN
SAFE
LOCKS**

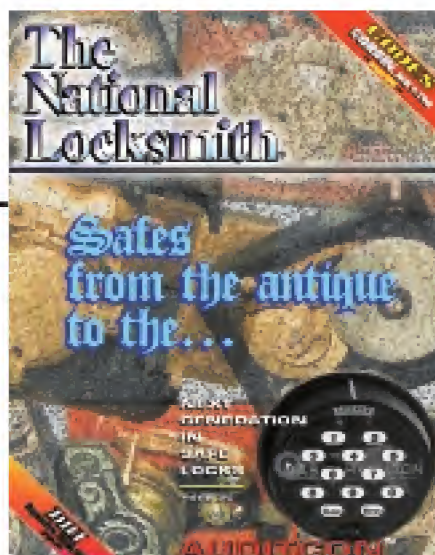
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AUDITCON™

DHL
September 27-29, 1997
page 61

On The Cover...



Mechanical safe locks have remained pretty much the same for hundreds of years. Now, companies like Mas-Hamilton is leading the way with the next generation of electronic locks.

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The National Locksmith® ISSN #0364-3719 is published monthly by the National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107. Periodicals postage paid at Bartlett, Illinois 60107 and additional mailing offices USPS 040110. Subscriptions \$39.00 per year in the USA: \$52.00 per year in Canada; \$65.00 in all other countries. Single copies \$5.00 each. Postmaster, please send change of address to National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107. ©1997 by the National Publishing Company. All rights reserved. Printed in the U.S.A.



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COMMENTARY



<http://www.TheNationalLocksmith.com>
User name: national User ID: G5fh84

"Go away, kid."

"Sorry kid, you don't have enough experience," is a phrase many beginning locksmiths have heard when applying for jobs with established shops.

"But how do I get experience if no one will hire me?" is what the beginner is asking him or herself after being turned away.

In an ideal world, we'd all be able to find employees who require no training, and can carry their weight from day one. However, in the real world, this doesn't usually happen, especially among locksmiths.

Further complicating matters is that many locksmiths are reluctant to hire employees and train them, fearing that down the line someday, that very employee will become a competitor and try to steal their accounts.

Doesn't this sound like a Catch 22 situation where you are damned if you do and damned if you don't?

My suggestion in this matter is that you look seriously at employee candidates who have at least taken a basic course of locksmithing. Sure, they won't be able to hop in the truck and handle calls without help or training first. But these are people who have demonstrated a high degree of motivation in starting to learn their craft.

OK, these candidates also have to realize that in this industry you have to pay your dues before you begin to make serious money. So you need to design a compensation plan that starts out at a level which is fair to you, the employer, taking into account that a newbie just isn't worth twenty bucks an hour. But this plan also needs to show the new employee that as he or she grows in ability, the compensation will grow.

Consider listing out what your goals would be for the new employee at each increasing level of pay. To get raise one, for example, the employee must become competent at the following: key selection and duplication behind the counter, code lookup and cutting, and correctly filling out the bench job tickets...or whatever you deem reasonable. Show the employee, that as they learn to do emergency openings and car openings without much babysitting, that they move to the next level, and so on.

In this manner, you are creating incentives for your

employees to add skills to their arsenal which will benefit your business over the long haul. Special consideration for learning master keying, or safe work will motivate your people to become better locksmiths, and thus, more productive members of your team.

This approach seems much more sensible to me than turning away all applicants who are not 5 year veterans. After all, how many of those walk into your shop anyway? It will also yield you an employee who is more motivated and loyal than the norm. Someone who accepts a seven dollar an hour job with no incentive to really learn this trade will never be valuable to your business.

I can hear the muttering from here. "Sure, but these guys will just want to steal my customers next year." My thinking there is that we all face competition in this life, and that there is no way in the world to keep competition at bay by working like a one armed paper hanger, treating locksmithing skills like a state secret.

Just like we teach our children values so that they are contributing members of society when they go their own way, your best defense against bad and cut rate locksmiths is to teach your employees by example how locksmithing is supposed to work... an honest job for an honest dollar.

Marc Goldberg



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Receive locksmith info by E-Mail
Write us at: NATLOCK@aol.com

Marc Goldberg
Publisher

September 1997 • 5

Mango's Message

Talking Heads & Imaginary Images

Have you ever performed a service for a customer that you knew was totally unnecessary? I'm not talking about replacing an entire deadbolt lock when the only thing needing replacement was the tailpiece. I'm talking about installing door viewers on closet doors because clothes are missing and your customer wants to see who is "stealing" them! Or, wrapping a chain around a refrigerator and securing it with a Medeco padlock because "someone" is taking potatoes! That may seem ridiculous, but trust me, if you work in this field for any length of time, you will have just such a customer(s). They perceive there is a threat, when in actuality, it is nothing more than their imagination.

I have had several such customers and in every case, they were single women living alone. Now, I'm not implying that for a woman to maintain her sanity she must have the presence of a man, nor am I insinuating that women are more unstable and hallucinogenic than men. I just don't think men live long enough to ... "I don't care what you say, I'm not going to do it."



"Oh yes you are and you'll do exactly what I tell you"

"I will not and you can't make me"...go insane.

I had one lady who was sure someone had a key to her house and was getting in. She wasn't sure who it was, but she was sure someone was and wanted to put better locks on the house.

At the time, I had no idea she was imagining things and went to her residence to install high

security locks with restricted keys.

A couple weeks later, this same lady came into the store and wanted the locks changed because someone was still getting into her home. By this time I was a little suspicious and asked how she knew someone was getting into her house?

"Because," she stated. "They're taking my pantihose!"

How can you argue with that?

Another lady customer who also had key restricted high security locks on her home said someone was getting into her house as well. Every time they did, she would remove the locks herself and bring them into the store to be rekeyed. Nobody really knew what was going on because she would just bring the locks in, ask to have them rekeyed, and then leave, reinstalling them herself.

After about her fifth rekey trip in three months, she was a bit unsettled.

"I thought you said these were good locks" she spouted.

"They are" I defended.

"Well, someone keeps getting into my house."

"Are things missing?" I asked.

"No" she responded.

"Then, why is someone going into your house? I questioned.

"To rearrange my furniture" she shouted. "Every time I go home my furniture is rearranged."

Had I known that, I

**Continued on
page 8.**

Greg Mango

**Greg Mango
Editor**



Mango's Message

Continued from page 6



would have sold her furniture locks!

Over the years of being in the field, I had acquired a few such customers. Another lady claimed someone was taking her potatoes. Nothing else, just her potatoes. Yet another, her clothes and undergarments. She was the one who wanted door viewers installed on every closet and cam locks installed on her dresser.

One of the most unusual cases that I witnessed, however, was with a lady who specifically asked to have a Medeco deadbolt installed on her front door. She lived in a rather upscale high rise condominium on the snobbish side of town. After being cleared by a front desk guard and riding an elevator to her floor, I knocked on the door. An elderly woman set in tailored designer clothes and a string of pearls draped around her neck answered. After inviting me in, it was immediately evident that she was accustomed to the finer things in life.

Her house was incredibly beautiful, with select pieces of furniture in pristine condition displayed against crown molded walls and ceilings, accented with original oil paintings blocked in frames that probably cost more than I make a year. She offered me something to drink, but I politely declined, opting instead to get to work.

I assembled the necessary tools and proceeded to install the lock. As I worked, I could hear someone talking, and then someone whispering, and then someone laughing like a hyena in another room. Over and over again. I became a bit suspicious as to what was going on because there seemed to be a repeating pattern to the structure of the vocal occurrences. However, there was two distinct voices in the conversation. I couldn't quite hear what was being said, but whatever it was, the participants were enjoying themselves. I just assumed there was another person in the room with this lady and dismissed my concerns.

Periodically the woman would check on me and kindly offer food and drinks. The entire time I was working, the conversation in the other room continued. At times it would intensify and the laughter would become even more pronounced. After a while it became quite comical and even got me to laughing. I then began to wonder if maybe my customer had been hitting the bottle a bit too much, but there was no behavioral signs of such when she was in my

presence. She appeared very poised and in full control of her senses when we talked. There was no apparent signs of anything out of the ordinary.

It took me about 45 minutes to complete the job when I gathered up my tools and wrote out a bill. My customer asked what the damages were and went to get her check book. Once again, she was perfectly normal, until she walked into the other room to get her check book. At that time, the real story was revealed.

She was in my line of sight and I was able to watch her as she went to get her check book. The minute she crossed the threshold, she started talking aloud and laughing to herself as if on cue. She would talk a bit, then whisper, whisper, whisper, and then just howl like a hyena. Her body language would even change as she transformed into the various characters, talking to voices only she could hear. It was actually quite painful to witness.

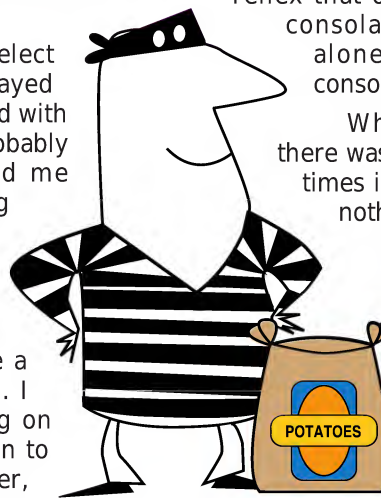
This was one of the most unusual behavioral patterns I have encountered because when she would talk with me she was capable of carrying on a normal conversation with absolutely no indication that she was unstable. However, the minute she would walk into another room, she was fully engrossed in speaking with the spirits, yet able to function and accomplish routine tasks. I felt rather sad for her because I can only assume this behavior was an involuntary reflex that occurred all the time. Possibly the only consolation, is even though this woman lived alone, she was never really alone. Some consolation.

Whenever I encountered such a situation, there was a part of me that wished I could help. At times it is difficult to accept the fact that there is nothing you can do to correct a situation.

For many years I struggled with the knowledge that I was selling merchandise (sometimes very expensive merchandise) and providing a service to someone who I knew didn't need it. This would have been fine if I was dealing with someone in full control of their faculties, but when dealing with someone who isn't, it does change the situation a bit.

To this day it bothers me, because I was never one to take advantage of a situation or circumstance, be it good or bad, to benefit myself. I have always been particularly sensitive towards those less fortunate than I, or toward those who endure serious traumatic disabilities. In the end, I suppose if my service provided these individuals some sense of security or piece of mind, however brief it may be, it was better than doing nothing. I suppose.

If you haven't already, the day will come when you will encounter just such a customer. When you do, you too will struggle with what to do. **RL**



S E P T E M B E R 1 9 9 7

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

A Locksmith Association's Donation

The Locksmith Association of Connecticut, Inc. is donating \$250.00 along with some private donations from members of LAOC, Inc. to the Northern Prairie Locksmith Association. This donation is coming from a fund named "Disaster Fund" which is intended to help fellow locksmiths which have undergone a disaster. The membership felt compelled to come to the aid of fellow locksmiths which were devastated by the North Dakota floods.

If anyone is interested in contributing to this most worthy cause, contact the Northern Prairie Locksmith Association at 218-681-2453 or send donations to:

The Locksmith Flood Relieve Fund
Western Bank
7035 10th St. N.
Oakdale, MN 55128

This is when we need to stick together and help a fellow human being and tradesmen in their hour of need.

*Robert L. Maloney Sr.
Connecticut*

E.L. Reinhardt is Hard to Beat

This letter is in support of a letter written by Mr. Dave Franchauk, which appeared in your July 1997 issue.

I too must agree with Mr. Franchauk on the service provided by E.L. Reinhardt. I have been a locksmith for 12 years and when I first started out it was hard to set up accounts with firms as I could not meet their requirements. I contacted E.L. Reinhardt and was immediately treated like an established customer. Their reputation for service is why I do all my business with them.

There have been times when I have been between a rock and a hard place, called E.L. Reinhardt for an answer only to be given their usual line "No problem, it's taken care of."

If it had not been for them believing in me, I can safely say I would not be in this business today. Hats off to the entire staff, and keep up the good work.

*Al Ernst
Minnesota*

Facial Hair May Impair

In your June issue there was a letter from William Weiss about beards which I would like to comment on.

When we look for help, we have the stipulations he objected to: clean and neat appearance, well groomed and clean shaven. Then we add more... must wear clean uniform



every day, must not have been convicted, must be a non-smoker, must not be a drug user, no strong cologne or perfume, are just some of the "stipulations" that are all spelled out in our employee manual. If you don't like the "stipulations" don't apply for the job.

I am sure William is right when he says appearance does not impair technical locksmith ability. Conversely, it will impair the ability to interact favorably with some of our customer base on a non-technical level. The appearance of the technician servicing the vault at a bank is very important to the banker, as well as the customers whom may see him in the vault. No one is offended by a neat, clean, shaven technician, so that is how we will look.

My wife and I have spent many years of hard work, money, sweat and tears to make our business a success in a small conservative town. When someone else wants to buy it and risk THEIR money and THEIR reputation, they are welcome to change any policies they want! Until

The National Locksmith
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Attn: Editor

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then, it is my money on the line and I will set the policies I feel are necessary for continued success.

*Lenny Wollitz
Minnesota*

Forensic Follies

I was quite interested in how Don Shiles who wrote the forensic article in July, was able to prove that his friend didn't steal anything from the company he worked at. Apparently he was suspected and I don't see how marks on an outside door cylinder would change that. He could have put the marks there himself to try and make it appear that someone had tried to force their way in.

In court, proving how someone got into a building is of small value anyway, it is proving that they stole something from that building that will put them away. The only thing marks on an outside lock could prove was that someone was outside when they made them and that isn't much of a crime.

Viewing too many cop shows make it seem that scientific evidence on the outside of a crime scene is as important as the evidence inside and that's just not true. Having spent a decade investigating crimes myself, I can assure you that you will be better off staying a locksmith and staying out of the court room. I make much more an hour doing this than I did doing investigative work and my clients are much nicer. *G. Henderson
E-mail*

Roadside Service Frustration

I am writing this letter in frustration about recent developments in service that I have been having with three of the roadside service networks. It seems they have all decided that the rates we have quoted — and that they have authorized payment on in the past — are now not acceptable.

CCMC just recently changed the rates that they are willing to pay the locksmith for performing the duties that we have done since they started business. Recently, after quoting rates as we normally do, and with the dispatchers approval, we performed various automobile openings for the company.

When the check arrived for the service, three of the jobs were paid at

a rate that they established in March of 1994, with no annual review. Their rate was \$35.00 days and an additional \$5.00 for nights, plus \$1.00 per mile after 10 miles. We never signed an agreement for these rates without the possibility of an annual review.

I am sorry, but I can't go out for the rates they want to pay, pay my employees, make a profit and stay in business. Since we would not agree to their terms, they said that they would not use us anymore as their primary locksmith in this area. Since other locksmiths in our area don't go out at night, I guess all their customers will have to wait until the morning hours for service.

RNC or General Motors has a problem paying the rate for the service call plus sales taxes if you quote them as separate items. I was told today that they don't pay sales tax. I asked for a sales tax exemption form for our state and I was told just to add the approximate amount of sales tax to the estimated cost of the trip charge. This is fine, but it seems that this type of over estimating will cost them more money than if they paid the right amount quoted over the phone.

In my opinion, it seems that since locksmiths as a group made these companies successful, we now have to renegotiate rates for our services. What they are doing amounts to price fixing. I think that we have to act in a united front with these companies so we can all survive and make a living in the profession we have chosen in life.

We are all professional locksmiths and our services and our rates reflect the professionalism that we all show in our businesses. Look what the discount stores (Home Depot, Wal-Mart, etc.) have done to our industry and others. If these service companies can set the rates that they are willing to pay for your area, you may not be able to make a living as a locksmith doing emergency service lockouts. *William Timmann, CML
New Jersey*

From NLSA to SHDA

Recently the National Locksmith Suppliers Association (NLSA) voted to change its name to the Security Hardware Distributors Association (SHDA). This decision was viewed very seriously by our membership.

The issue of a name change was first presented by the general membership four years ago. Since that time, he NLSA board appointed a task force to consider a name change. More than two years passed and several sessions were held before a final name change was selected and approved by the membership. This was no easy process!

Why the need for a name change? There were several reasons sighted by members. However, nobody stated that locksmiths were not purchasing enough products or that they were heading in the wrong direction. True, some members sell other customers groups and wanted an association that defined the "INDUSTRY" they were in and not a particular customer group they served. Other distributors wanted the name changed so it better positioned the association and their company to manufacturers who do not traditionally sell into the locksmith market. Such manufacturers as NAPCO, Sentrol, Panasonic, etc., view locksmiths as a huge opportunity for expanding sales of non-traditional lock products such as access control, electronic security, and CCTV. By changing our name to a security association, individual wholesalers are now better positioned with the "electronic" manufacturers to serve the growing needs of locksmiths who are embracing these products.

It is no secret that a growing number of locksmiths are expanding their product offering to include higher end electronic security and access control products. By positioning the association as "security distributors," SHDA not only help its members, but those locksmiths that are involved in the rapidly growing electronic security market.

There are several challenges facing the locksmith industry. How locksmiths respond to the changes occurring in our industry today will determine their relative success in the future. As the new President of SHDA, I look at the future of our industry and see tremendous opportunities for those individuals at both the dealer (locksmith) and distributor level who are willing to take risks and make changes to their businesses.

Sean DeForrest, SHDA President



Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Pro-Lok Releases New Decoding & Rekeying Tools



Pro-Lok introduces three new service tools for professional locksmiths. The LT370 MP Removal/Follower is a machined aluminum follower tool that allows removal of upper chamber master pins with a quick twist. The handsome red-anodized finish keeps it visible. New key decoders fashioned from high-grade stainless steel are the KDSC (fits all Schlage keys) and the KDIC for Best/Falcon style IC/A2 interchangeable core keys. Both utilize a "Sure-Step" design and use factory specifications and tolerances.

Radio Key 600 Fea- tures Stand Alone Proximity

Secura Key announces the new Radio Key 600 proximity access control system, which is now supplied with a new international keypad featuring easy to understand programming symbols.

Radio Key 600 includes a built-in programming keypad, audible and LED indicators, a power supply and stand-off spacer for mounting on metal surfaces. Radio Key 600 boasts a 6" read range, and features a Request-to-Exit input and alarm shunt contacts. A low-cost auxiliary reader is available for higher security, extreme weather or for concealed installations.

Premier Stainless Palmer Security Products Introduces New Line of Security Cabinets



Palmer Security Products, recently unveiled their newest line of security cabinets specifically designed for the hospital marketplace.

Available in several styles, the safes are intended for securing firearms and cameras in the emergency room, and for narcotics storage in ambulances. Other uses include protection of patent valuables and notebook computers.

Palmer Security Product's cabinets and safes are constructed of heavy gauge steel to resist prying and come equipped with several locking mechanism options.

Securitron Introduces Infrared Request To Exit Device



Securitron Magnalock Corp. has introduced the XMS Exit Motion Sensor designed specifically for the release of electromagnetic locks. The attractively designed XMS is easy to install and to adjust with the

Steel Padlock #90/50

The ABUS #90/50 padlock is specially crafted of high strength stainless steel alloy and features a built in shroud which provide extra protection from bolt-cutter attack. The stainless steel body and shackle provides excellent resistance to salt water spray and other highly corrosive elements.



The durable ABUS 5 pin tumbler mechanism is manufactured from all rust-free components and will resist all that the elements can throw at it. The cylinder plug is crafted from stainless steel. The pins are anti-pick mushroom shaped and complimented by a paracentric keyway configuration.

sensing field easily directed to only unlock when it is supposed to. The dual Form "C" relays allow the XMS to signal an alarm or access control system and release the electromagnetic lock after a 50 millisecond delay to prevent false alarms.

The XMS operates on 12 to 28 filtered VDC and is UL listed.

Locksmith Light from Suncoast Security



The Locksmith Light from Suncoast Security will help identify a locksmith and his vehicle on either day or night calls. The front of the light says, "Locksmith" and the back has room for up to 25 letters or numbers to identify a business and phone number. The light, which can be seen for up to a half mile, can be mounted to the top of a locksmith's vehicle with

only two screws. Domes are available in white, orange, yellow or green, and letters come in black, red, white, orange, yellow or green. The tell-tale bubble comes in amber, green or white.

Super System Key Blank Storage



The new Super System Model III stores approximately 6000 key blanks and is organized in a 15-1/2" sq. 18 gauge. metal box. All parts are baked powder coated for a tough finish. Each Model III panel will weigh approximately 2 lbs. resulting in 20 lbs. less weight for the KB500SS. The weight reduction was obtained by punching the hooks out of the metal panel rather than welding the hooks on. Free key blank chart

Continued from page 14

S E C U R I T Y C A F É

shipped with each box. Optional lid or lid and cushion available.

Salsbury Industries #4900 Collection Box

Since 1936, Salsbury Industries has been manufacturing and distributing mailboxes and postal specialties for security minded individuals, organizations and companies. Among the products offered by Salsbury is the Model #4900 Collection Box. Constructed of 16 gauge steel, this reinforced collection box provides the utmost in security and will withstand even the most severe weather conditions. Available in 4 colors, the unit has a hasp for locking and an optional snorkel for drive-by convenience.



Ultra Hardware Products Introduces New "Point-of Purchase Displays"

One is a heavy duty color combination padlock Point-of-Purchase Display containing 90 pieces in polished stainless steel, with four brightly colored assorted dial plates (red, green, yellow and blue) featuring a three number locking mechanism and hardened chrome plated steel shackle.

Each lock comes with a lifetime warranty, and is individually skin carded on a new re-designed card. The padlocks are great for lockers, bikes, sheds, etc.

AGW to Distribute Sensing Edges From Miller Edge

Automatic Gate Wholesalers (AGW), a distributor of access control products, has

American Lock Introduces Shackleless Solid Steel Model 2010

American Lock Company, introduced the Model 2010, a new shackleless round padlock machined from bars of solid steel. The case hardened, solid steel construction of the Model 2010 provides maximum protection against drilling and sawing, while its unique locking bolt design resists crowbar attacks and prying. This 2-3/4" round padlock also features an American




"The Model 2010 provides superior padlock protection — ideally suited for service vehicles and vending machines — at an affordable price. Due to its high quality construction, this padlock has proven to be resistant to most violent attempts to defeat it, including attacks from blow torches, hammers and dent pullers.

announced it will handle the Miller Edge Sensing Edge, an electrically activated safety edge for commercial and residential automated gates.

The sensing edge offers three sided activation, and is designed to immediately signal the gate operator to stop

and/or reverse gate motion if an obstruction is encountered.

Inner electrical contact elements provide fast, sensitive signaling upon impact, the manufacture stated, and their use can help guard against injury liability claims. 

SRI
SECURITY
RESOURCES INC.

SRI and Steve Young are working together to bring you the best in locksmith tools and supplies.

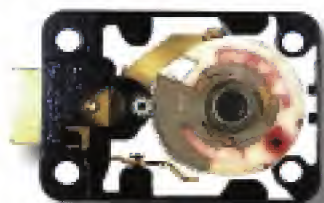
[Click here for more information](#)

THE WEB ZONE

A MONTHLY REVIEW OF WEB SITES

Carl Cloud's Safe Site

<http://www.electricti.com/~cloudy/>



You might recognize Carl as a writer for both The National Locksmith, the NSO, and the author of Drilling Safes, published by The National Locksmith. In his site, Carl offers safe lock templates for sale, but also

interesting technical tidbits for the safe technician.

In an online article, Carl explains the concept of the forbidden zone, and there are some graphics archived, but we'd like to see more added to that area. A section of hint and tips this month gives valuable information on dealing with spline keys. If you like safe work, check out Carl's site. Let's hope it grows!

Detex Corporation

<http://www.detex.com/>



In the Detex site you'll find a comprehensive online catalog showing product

and complete specification in the areas of Security Door Hardware, Industrial Security Products, and more. One advantage of this site is that you can download photos and specifications on products and then create your own sell sheets when making a proposal to a customer on a security solution.

We would like to see more added in the way of installation instructions, and perhaps even a troubleshooting guide for locksmith installers. However, you will certainly get a great overview of the product line and many applications they serve.

National Auto Lock Service, Inc.

<http://www.laserkey.com/>



This is Mike Hyde's web site, Mike being the author of the famous

AutoSmart published by The National Locksmith magazine. But what you might not know is that Mike also offers a range of products and services to automotive locksmiths, recapped in this site.

In the products area, you'll get the lowdown on where to obtain High Security Auto depth and space key guides, 97-98 Buick Park Ave. Transponder Blanks, New Volvo 4-Track and Mercedes ignitions, and lots more. This is a collection of hard to find automotive products, and if you work on cars, you'll want to log on.

Guide to Lock Picking

<http://www.lysator.liu.se/mit-guide/mit-guide.html>



Here's a web site that is guaranteed to make you mad! This site contains very descriptive information complete with illustrations on how to pick locks. What will make you mad is that this site is not a locksmith-only presentation. Instead, it's right out there on the public web for all the kids and ex-cons to enjoy.

We are not condoning this site at all, but if you want an employee to learn lock picking, you might steer them to this site. (We'd really rather see it shut down.) Contents include what seems to be full instructions, lead off with the cheery advice that: "The big secret of lock picking is that it's easy. Anyone can learn how to pick locks." Try not to put your fist through your monitor when viewing this site.

Institutional Locksmiths' Association

<http://www.colum.mindspring.com/~inhouse/startila.htm>



If you are a locksmith for a facility such as a hospital, college or other institution, you should certainly stop here when you're surfing the web. The ILA is an association whose members face the same sets of challenges and priorities as you.

From their site, you can get information about local ILA chapters, information about learning opportunities, plus you can view a sample issue of the organization's newsletter, "Key Issues." The issue we viewed contained lots of practical advice including an article on how to convince your company to send you to a locksmith class!

Locknetics Security Engineering

<http://www.locknetics.com/>

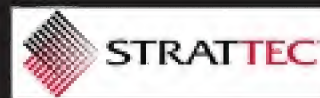
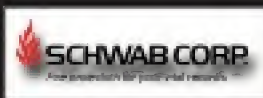


Locknetics has put together an information packed cyber home for their product line with areas

dedicated to: Smart Magnetic Locks, Electromagnetic Locks, Smart Mechanical Locks, Electromechanical Locks, Access & Egress Control, and lots more.

The What's New department displayed information on the 301+ Delayed Egress System with 650 pounds of power, the GF3000 Gravity Force™ Electromagnetic lock, and the Locklink® Access Control Management System for Windows 95.

The Inquiries area allows you to communicate directly with either Tech or Engineering support. Very handy when planning installations. **TNL**



**COVER
STORY!**

MAS-HAMILTON AUDITCON™ SERIES

by
Charles Stephenson, CPS



1. The first of the Auditcon series was the model 2100.

Mas-Hamilton just released five new locks in their Auditcon™ series and the models are 100R, 200R, 200V, 400R, and 400V. The R designates a round input pad while the V designates a vertical input pad. The vertical input pad is more friendly to use when on a safe which is low in height such as those you might find under counters in businesses or a not so tall home safe.

The round face is best suited for safes of taller heights. I should be more politically correct and add that these locks are not intended for the safe market alone. They are also designed and engineered to meet everyday needs as access managers on pedestrian doors such as file rooms, R&D areas and other areas needing access control with an audit trail.

Auditcon is a combination of the phrases "audit trail" and "access control." Therefore Auditcon describes a wide range of possible uses for this series of

locks. The first of the Auditcon series, the model 2100, has already gone into service on thousands of doors and drawers in many different applications (see Photograph 1).

Genesis Technology is a trademarked name for the mechanism which creates the power by which the locks operate. This feature is the hallmark of the Mas-Hamilton Groups' product line. They have eliminated the need for external transformers or batteries or both.



2. The Auditcon 100R is the low end Auditcon lock, but certainly not a low end lock, feature wise.



Another common thread in this family of locks is they are all intended to retrofit easily in place of standard mechanical combination locks. The tools needed for a retrofit job are as follows: #2 Phillips head screwdriver, 9/ 64" Allen wrench, fine tooth hacksaw (32 TPI), small flat file, all-purpose scissors and a ruler or tape measure. A torque screwdriver is recommended but not required.

Let's take an overview of each of the locks in the Auditcon series (with the exception of the 2100 which was previously covered) and examine the various features.

AUDITCON 100R

The newest locks in the Auditcon series is the models 100R, 200R and V and the 400R. The 100R is the low end Auditcon lock, but as we will see, it is certainly not a low end lock feature wise (see Photograph 2).

The 100R offers 4 levels of authority beginning with a Super M aster code which is restricted to "shelving the lock" (setting to factory mode) in the event that the M aster User combination is lost.

The M aster User sets the operating mode of the lock, the time delay, toggles the sound on or off, sets time and date (model 400 only), may add and delete Supervisor(s), set the silent duress alarm and sets and changes their PIN. If the lock is set in Independent M ode, the M aster User can add and delete the access user. Another function the M aster User may perform is to retrieve audit records. The M aster User cannot open the lock however, it is only used to program the lock.

When the lock is set in Supervisory/ Subordinate M ode, the model 100 allows for 1 Supervisor and up to 5 Subordinate Users. The supervisor cannot open the lock but can add and delete subordinate users, enable and disable subordinate users, change their own PIN, set the silent duress alarm and retrieve audit records.

The subordinate users can change their PIN, set the silent duress alarm, retrieve audit records and open/ close the lock.

The use of the audit trail feature in the Auditcon series requires an optional Windows software package and will include a key reader port and an "SA" key.

This lock requires the user to enter a two digit ID number plus a six digit PIN, whereas the Auditcon 2100 required the use of a PI (key) plus a four digit PIN. The only key used with the model 100 is the Supervisor Audit (SA) key to retrieve the audit information.

The 100R may be set for Independent M ode and then only one (Single Access) combination is required to open the lock or you may set the lock to Dual User access mode whereas the lock will require two combinations.

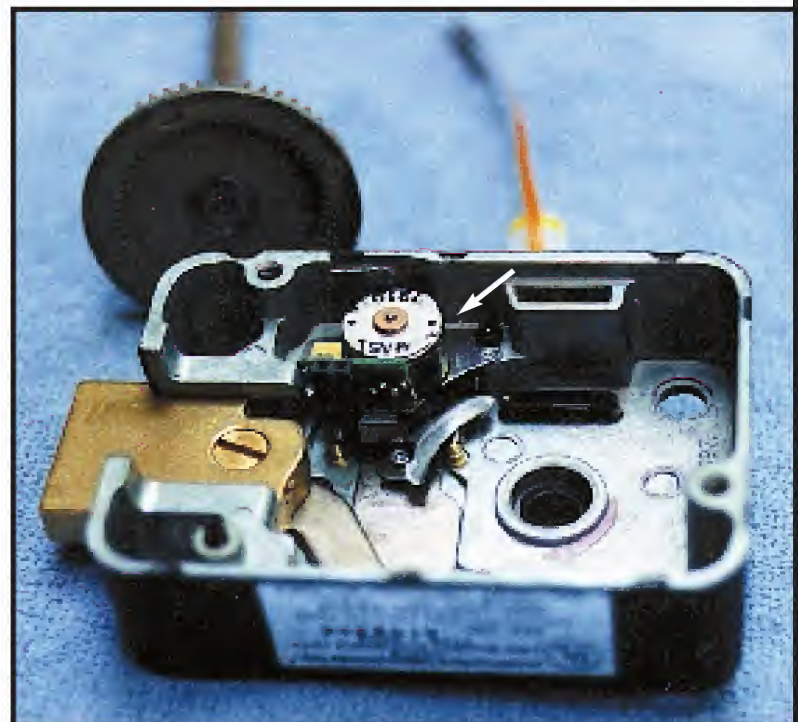
Similar to its big brother the 2100, this lock imposes a 3 minute penalty after 5 wrong try attempts. The time delay feature offers 5 to 99 minutes of delay with a 3 to 4 minute opening window. The audit trail stores 8 events and offers reporting in the form of User ID and the type of activity.

AUDITCON 200R/V

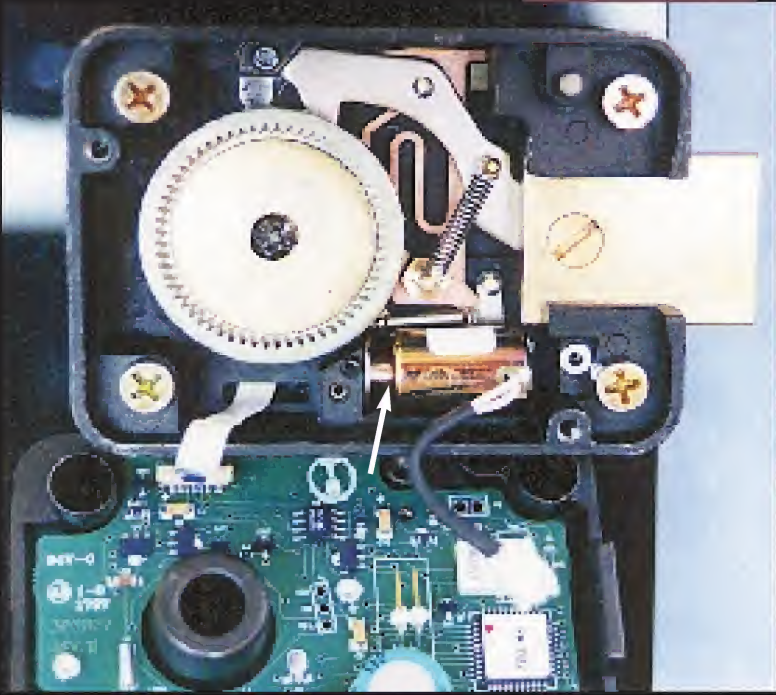
The Auditcon 200 is just like the 100 except it offers more in the way of users and audit trail. The Auditcon 200 is available in either a round version like the 100R or a Vertical footprint (see Photograph 3). The number of users increases to 19 and the number of recorded activities increases to 100 for the audit. Whereas the 100 had only one Supervisor the



3. The Auditcon 200 is available in either a round version like the 100R or a Vertical footprint.



4. The Mas-Hamilton X07 and Auditcon 2100 both use a Stepper Motor which allows the lock to open.



5. The Auditcon 100, 200 and 400 use a solenoid instead of a Stepper Motor in the lock case.

model 200 allows up to three Supervisors.

The Users are assigned to a Supervisor and can only open the lock when authorized by their Supervisor via the Supervisor entering their combination. In the event the Supervisor is deleted by the Master User all Subordinate Users to that Supervisor are deleted automatically.

AUDITCON 400R/V

The Auditcon 400 as you may have suspected is a more sophisticated version of the 100 and 200. Like the Auditcon 200, the 400 is available in either a round or vertical footprint and looks identical to both on the exterior. In this model we are offered up to 99 Users. The audit trail also is more sophisticated in that the number of recorded activities increases to 200 and accompanied by the date and time of entry. In addition, the lock records up to 10 different types of activities. The 400 increases the number of Supervisors to five.



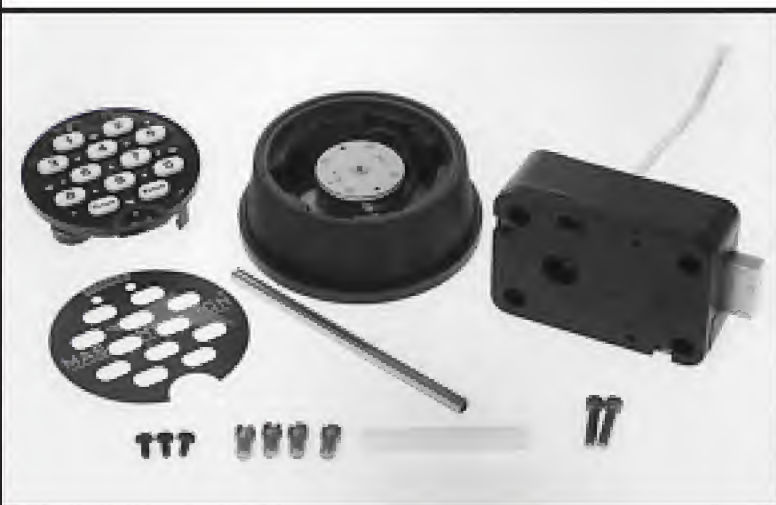
6. There is a warning label deterring cover removal on the lock.

AUDITCON INSTALLATION

SERIES 100R, 200R and 400R

In preparation for installing an Auditcon 100R, 200R, or 400R series lock, you will need to assemble some basic hand tools. Mas-Hamilton recommends a medium Phillips screwdriver with a #2 magnetized tip, 9/ 64" Allen wrench, fine pitch hacksaw (32 teeth/ inch), small flat file, all-purpose scissors, tape measure or ruler and a torque screwdriver (30 inch-pounds/ 3.4 newton-meters capacity).

I recommend that in addition to the basic hand tools required you add a set of non-magnetized screwdrivers which is always a good idea when working on electronic devices. A good file for removing burrs and smoothing cuts on spindles is a warding file. It is both fine grade and small. A very fine tooth pattern saw blade is available from many industrial supply catalogs or distribution centers in larger



7. The components you will receive in addition to an installation booklet and an operating booklet with the Auditcon lock.



8. Inspection of the spindle reveals that one end is tapped.

Continued on page 24



Continued from page 22



9. Measure and mark the spindle 3/8" from the outside of the container door.

cities. A small 6" pocket ruler is the handiest when measuring spindles before cutting.

One extremely important item to include in your electronic safe lock tool kit is an electrostatic discharge (ESD) wrist band. Simply slide the band over your hand and connect the clip on the end of the cable to a known ground. The biggest disappointment comes when you can't cause a lock to function only to discover later that you somehow exposed it to ESD and "fried the board." Please put the ESD wristband in the same category of important safety items as



10. While holding the spindle securely, insert the cam mounting screw through the back of the lock case.

safety glasses, hard toe shoes and a welding helmet.

Before proceeding to the installation, a brief overview of the Lock Assembly is needed. If you are familiar with the Mas-Hamilton X07 or Auditcon 2100, you know that they both use a Stepper Motor which allows the lock to open when the correct combination is input (see arrow in Photograph 4).

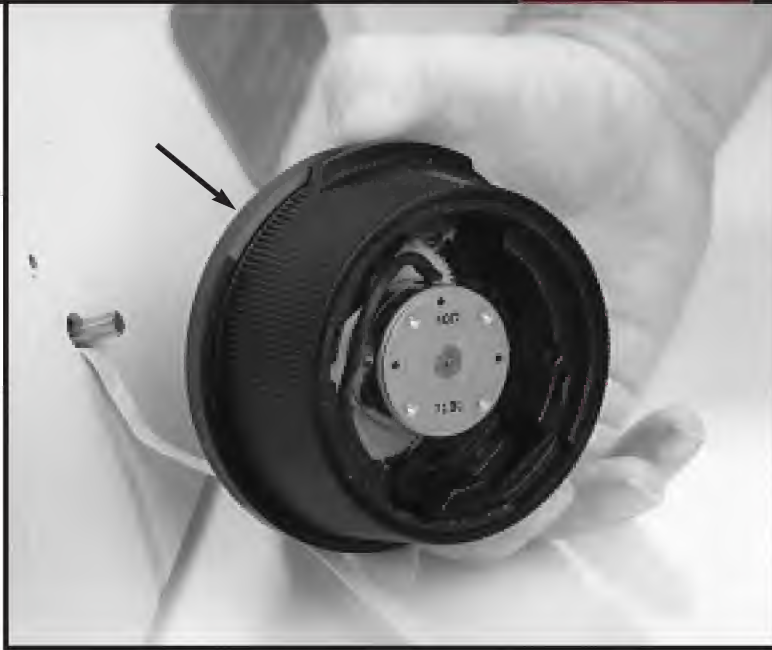
The Auditcon 100, 200 and 400 use a solenoid instead of a Stepper Motor in the lock case to release a slide allowing the lock to open (see arrow in Photograph 5).

Extra caution should be taken when removing the back cover of the lock because as you can see in Photograph 5,



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11. Before installing the dial assembly you must ascertain that the lip on the dial covers the red area on the dial assembly.

there are two cables which run from the back cover to the lock case. One to the solenoid and a ribbon cable which attaches to the keypad. Removing the lock case cover recklessly could sever either or both of the connecting cables resulting in a useless lock. In fact, on the back of the lock there is a warning label deterring cover removal (see Photograph 6).



12. Carefully guide the cable through one of the two cable receiving holes on the back of the dial assembly.

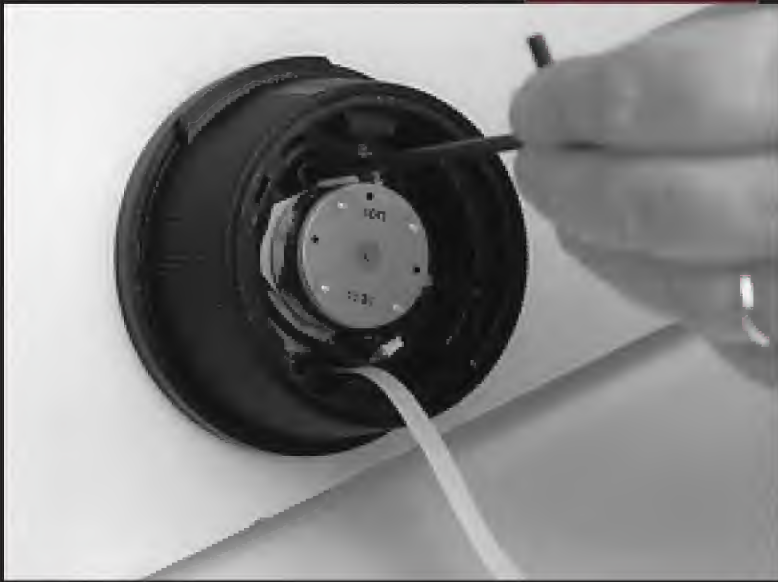
Photograph 7, shows the components you will receive in addition to an installation booklet and an operating booklet. In clockwise rotation you have the keypad assembly, dial assembly, lock case assembly, dial assembly mounting screws (2), protective spindle tube, spindle, lock case mounting screws (4), cam mounting screw (only 1 and not three) and dial decal.

Having said that, I will assume you have removed the old lock, dial and ring from the safe door or have located, drilled

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13. Carefully attach the dial assembly to the door using the two socket head cap screws provided.

and tapped the necessary holes for mounting a standard footprint lock, dial and ring. I furthermore assume that you will read the entire instruction booklet before proceeding with any installation.

To start we push the plastic spindle tube onto the small protruding horn on the lock case making sure the cable is outside the tube. You must assure that the ESD cover stays secure on the end of the cable throughout the next several steps. If a small piece of tape is needed to insure this, then so be it.



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14. Inserting the 4-pin generator cable on the dial assembly into the 4-pin connector on the keypad assembly.

A pair of alligator forceps in a long length will make guiding the cable through the spindle hole much easier. This is another item you may want to consider for your tool kit. Carefully guide the cable and tube through the spindle hole and attach the lock with a couple of screws (snug) so as to free both hands for the task at hand. Mark the tube flush (to within 1/16") with the outside of the container door. Remove the lock and tube once again being careful with the cable and it's, ESD shield.

Cut the tube inside the mark with the scissors making the cut as square as possible. Now tape the cable to the outside of the tube with the insulator tape provided. Proceed to mount the lock on the container (carefully) and secure with the four mounting screws.

Inspection of the spindle reveals that one end is tapped and the spindle must be oriented to mate with the grooves in the cam (see Photograph 8). The cam should be turned in a direction that cause the grooves to point toward the lock bolt.

Insert the spindle through the spindle hole and into the cam. Make sure that the spindle is properly seated or the perusing measurements will cause too short of a spindle. It is very easy to foul up this important step and not have the spindle seated completely. As soon as you are confident that the spindle is seated to it's maximum depth, measure and mark the spindle 3/8" from the outside of the container door (see Photograph 9). This measurement is critical and you are allowed a minus 1/16".

Remove the spindle, cut (squarely), deburr with the file and reinsert as before. While holding the spindle securely, insert the cam mounting screw through the back of the lock case (cover removal is not necessary) and snug it (see Photograph 10).

Before installing the dial assembly you must ascertain that the lip on the dial covers the red area on the dial assembly. Photograph 11, shows an incorrect alignment. This step assures that the dial assembly and the dial are in alignment with one another. The lip on the dial represents the top of the assembly.

Next, carefully guide the cable through one of the two cable receiving holes on the back of the dial assembly (see Photograph 12).



15. You must position the generator cable around the generator in a counter-clockwise direction.

While holding the dial assembly in it's proper alignment, carefully attach it to the door using the two socket head cap screws provided (see Photograph 13). It is convenient that Mas-Hamilton provided for both horizontal and vertical mounting holes.

Tighten the cam mounting screw into the spindle while holding the dial secure.

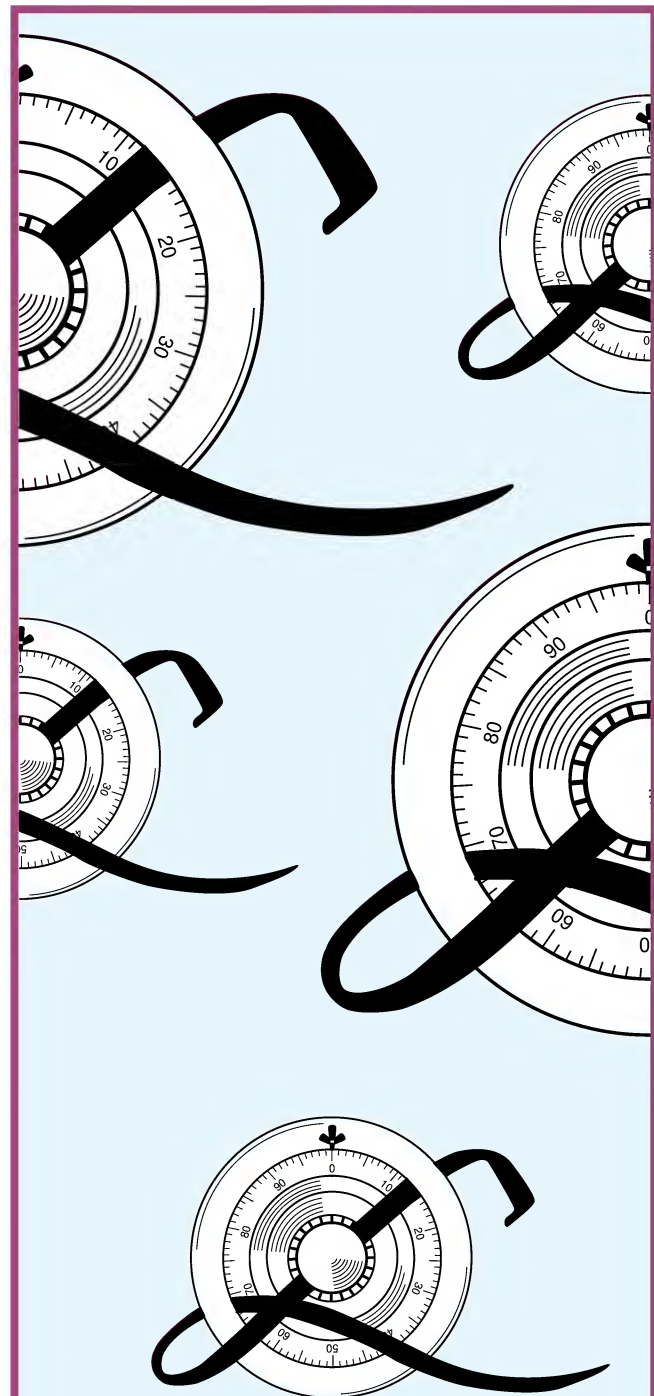
Photograph 14, shows inserting the 4-pin generator cable on the dial assembly into the 4-pin connector on the back of the keypad assembly. Inspect both the terminal and connector to observe their proper orientation. There is no need to force this connection when proper alignment is made.

One more cable alignment and orientation to be made and that is the flex cable. Before proceeding however, you must position the generator cable around the generator in a counter-clockwise direction (see Photograph 15). This will ensure that the cable does not become pinched when attaching the keypad assembly.

Remove the ESD shield taking precaution if it is taped to the cable. NOTE: Do not touch the silver leads on the flex cable. Pull the release on the ZIF connector outward to it's open position. Next, plug the flex cable into the ZIF connector with the silver leads facing toward the center of the keypad assembly as seen in Photograph 11. Close the ZIF connector to lock the flex cable in place. Both sides of the connector must be snapped into place and the flex cable must be square to the connector. The flex cable also must be positioned around the generator so as not to pinch it when the keypad is attached.

CAUTION: Before attaching the keypad assembly you want to test the lock to ensure all systems are operational. Once the keypad assembly is snapped into place it is very difficult to remove without damage.

Position the keypad assembly so the two catches are inserted into the notches on the dial assembly (see Photograph 16). Run the lock operation tests to ensure that the dial turns freely, the keypad is oriented correctly, the cables are positioned correctly and will not bind or be pinched and the lock will power up and open using the factory combination of any pair of numbers except 00 followed by 502550.



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16. Position the keypad assembly so the two catches are inserted into the notches on the dial assembly.

The lock is powered when the red and green LEDs flash. The green LED will flash slowly accompanied by a chirp when the lock is ready to open. Turn the dial assembly to the right approximately 225 degrees to retract the bolt. Turn the dial assembly counter clockwise to extend the bolt. Always return the dial assembly lip to the top most position so none of the red area is exposed before entering combination.



17. If all tests have succeeded you may snap the keypad assembly into place.

If all tests have succeeded you may snap the keypad assembly into place (see Photograph 17). Once again test the lock to ensure once again that it performs correctly and will open. In the event of failure, consult your installation manual (comes with the lock) for the uninstall procedure and test to perform.

For more information on the Auditcon Series 100, 200 and 400 or the name of a distributor nearest you call Mas-Hamilton at 1-800-950-4744. **TRL**



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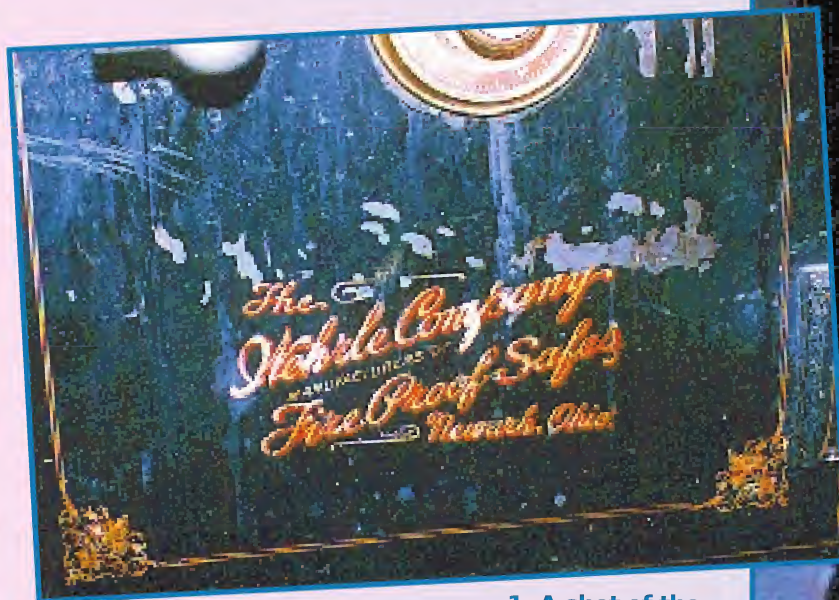


Give it a Wehrle

by Joe Bergen

I was called to open a safe because the family patriarch that owned it had recently passed on. The entire family had gathered and no one could find the combination, so naturally they wanted it open, and they wanted it NOW.

When I arrived, I was shown the safe which was in the back corner of the cellar. There was no doubt about the manufacturer, it said "Wehrle" right on the door, (see Photograph 1).



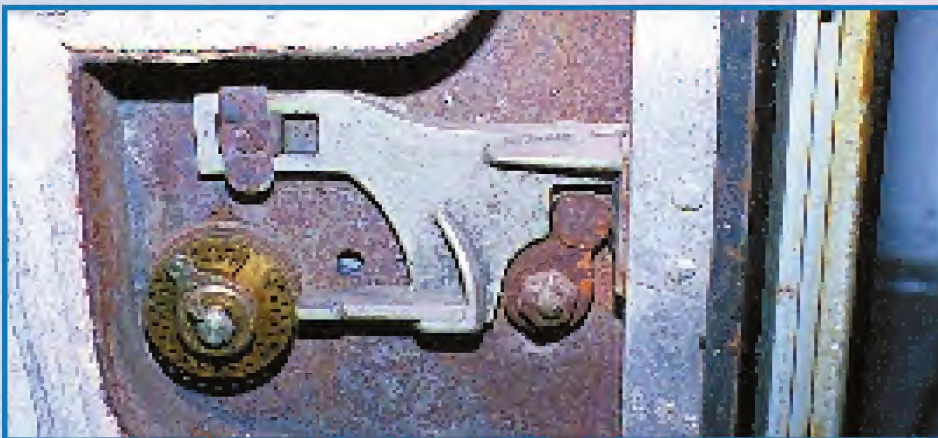
1. A shot of the Wehrle cast iron fire proof safe.



I pulled up a cinder block and sat down for a quick analysis of what we had to work with. A rattle of the handle showed that it moved freely a degree in both directions, but the door was definitely locked. Hey, you never know. I have opened safes by just walking up and turning the handle because no one had thought to try.

In this case the dial itself would not turn very well at all. As I rotated the dial it bound up severely for a stretch of about thirty numbers. It took two hands just to get it to rotate in either direction. It was as if the dial ring was badly out of alignment, (see Photograph 2).

2. The dial was very hard to turn for about a 30 number stretch.



3. My drill point was at 82 just outside the dial.

Back to the truck I went to haul in the drill box, scope box, light box, extension cord and assorted other goodies. At this point about half of the family was wandering in and out for a peak over my shoulder. It must have been a better show than whatever they had on TV. All I asked was that they stay a discreet distance back so as not to interfere, (or step on my tools, thank you).

Since the basic opening was of prime concern, I opted for a straight-in hole just outside the dial ring at 82. With a new 1/4" drill bit the hole was completely through the door "lickety split." There was no hard plate to deal with, just cast-iron and insulation, (see Photograph 3).

As you can see from the lock cavity shot, you can drill just about anywhere and will still be able to



4. The interior was carpeted, had shelves and a keyed storage box.

open this lock. Manipulation is also not out of the question, especially since this unit features a straight tailpiece arrangement.

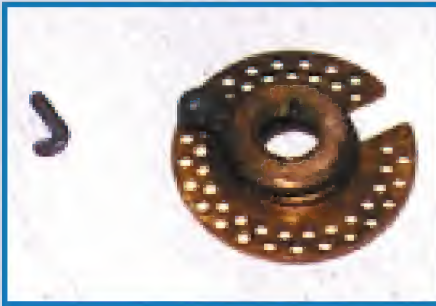
Having achieved that, I carefully inserted the scope in the hole and snapped vise grips onto the dial. A little twisting of the dial and I watched the gates line up right with the fence.

Then the subtle part of working with the public came in. I gathered my tools, boxed them up and out of the way before rotating the handle to unlock the safe, (see Photograph 4).



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5. To set the combination, first remove the spline key.



6. There is a threaded end cap that secures the drive pin.

My policy is that the customer gets to actually open the safe door, but in their haste to look inside, it is all too easy for them to step on a scope, light source, hand tools or trip over an extension cable, etc. So to keep it easy, I try to get my stuff out of harm's way first.

After closer examination of this unit, this Wehrle safe looks just like a Baum safe, right down to the lock used. The lock is made by Eagle and is a three wheel pin change lock. Notice the double rows of holes on the wheels. Both rows can be used to set a combination.

The drive pin is designed to slide up and down on the spindle shaft. This allows the ability to use either row of pin holes in the wheel. The spindle has two flats on the end and is smaller in length than the slot in the drive pin.

To set a combination, first remove the spline key, (see Photograph 5). Unscrew the end cap that retains the drive pin, (see Photograph 6). With the spline key and end cap removed, reposition the drive pin in another hole. Reverse the order to assemble, read the



7. The spline key, threaded end cap, drive pin and wheel arrangement.

wheels and record the combination.

The spline key, end cap, drive pin and wheel layout can be seen in Photograph 7.

After the family finished with the initial "Oohing" and "Aahing" of the contents, I asked them to empty the safe so that I could restore it to function. And, as usual with antique safes, the repairs and service took longer than the opening itself.

Never-the-less, the customer was happy and more than willing to pay the price. It was a nice way to end the day. **TL**

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The 1993 Subaru Impreza

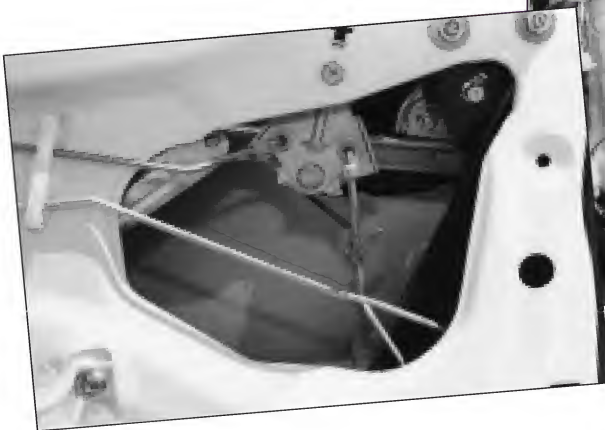
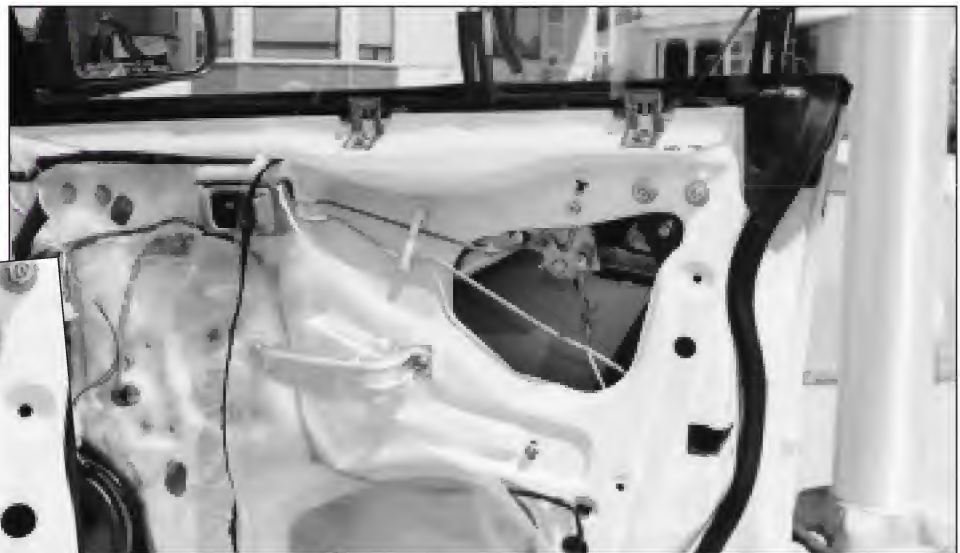


by
Michael Hyde

1. This issue we take a look at the Impreza by Subaru. This model is a wagon, if you can call it that, or maybe a sub-compact wagon. As with most Subarus, this model shares the Nissan keyways and tumblers, but not the ignition locks. The keying kit for this car is ASP A-16-100.

Opening

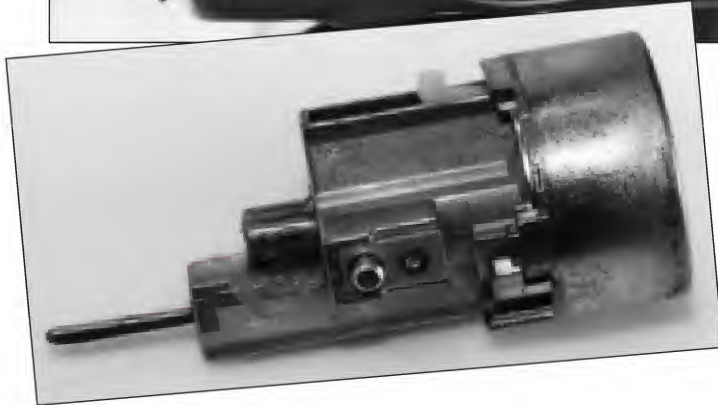
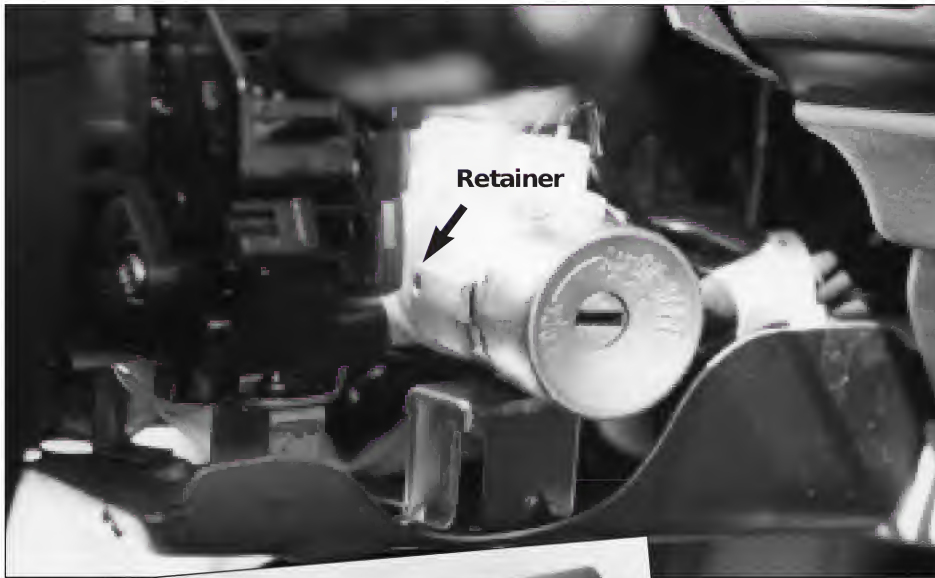
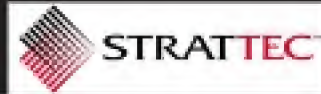
2. For this model we used an inverted slide linkage tool to grasp the linkage and pull up on the linkage rod.



Ignition Lock

3. Servicing this ignition is actually pretty easy compared with other similar Nissan/Subaru ignition servicing. This model utilizes the active retainer to make life easier for me and you. First you must remove the four Phillips head screws that hold the plastic clam-shell cowl in place. Next gently unsnap the cowl and push aside.





4. Remove the black plastic ring from around the ignition cylinder housing. Insert the working key and turn to the first accessory position. Depress the retainer and slide out the cylinder.



5. To service the ignition cylinder you need to remove a tension roll pin that blocks the ignition facecap from turning. I used a small pair of vise grips to grasp onto the pin and gingerly work it out. Once the pin is out you can rotate the ignition cylinder facecap and remove it.



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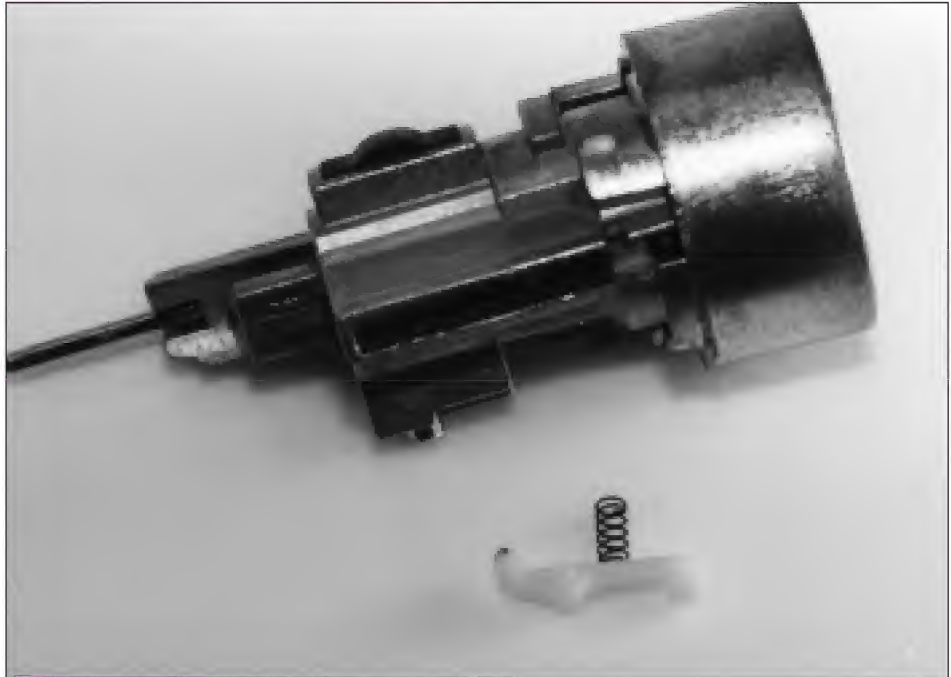
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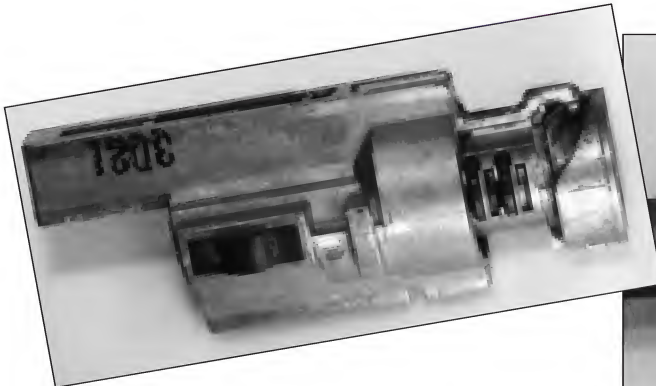
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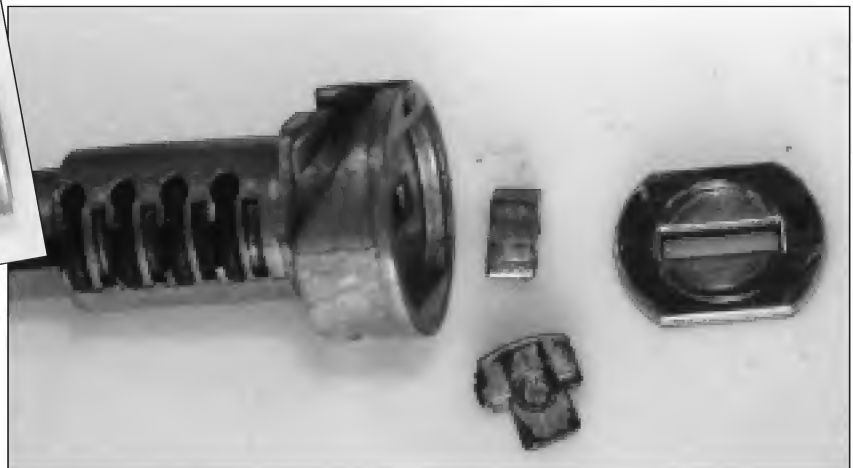
6. When you remove the facecap you will need to be careful not to lose the small ball bearing and spring located on the top side of the cylinder.



7. There is also a key buzzer arm with spring located on the bottom side of the housing.



8. Once the cylinder facecap has been removed and the other small parts secured then you can slide the cylinder plug out of the cylinder housing. Be aware of the interlock arm and the two other small detents. The ignition cylinder contain all eight tumblers.



Door Lock

9. The door lock cylinder is integrated into the door handle, sorta.





10. To remove the door lock cylinder you must remove the inside door panel.

11. First remove the hidden screw that is located in the door pull cavity.

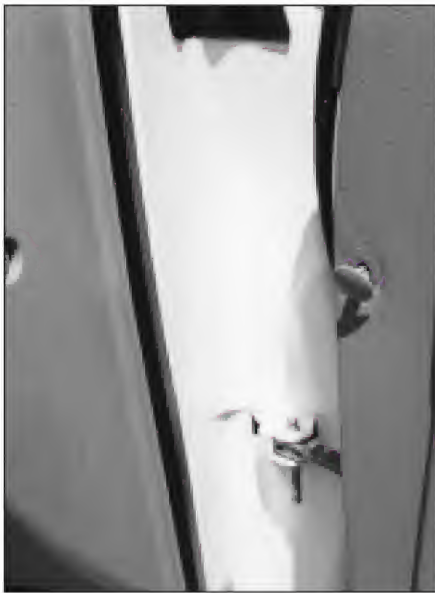


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12. Pop off the plastic trim clip on the center-forward section of the panel.



13. Next use a screwdriver to gently pop off the handle release trim piece.

14. Next pull outward on the bottom section of the panel to unsnap the push-in style plastic clips, and remove the panel. You must remove the two 10mm bolts that hold the outside handle assembly in place.

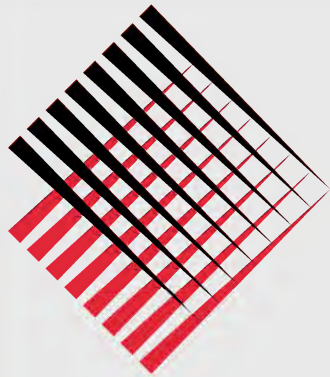


15. Slide the handle to the side to get to the cylinder.



16. The door lock cylinder does not sit in the handle but actually is held to the outside door panel by a horseshoe style retaining clip.

17. Remove the retaining clip and disconnect the linkage rod to remove the lock cylinder.

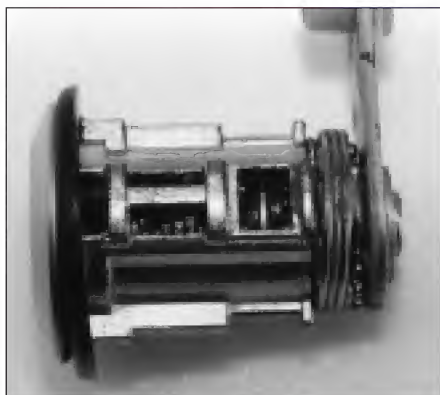


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18. The lock cylinder housing has a large drain hole area so it is possible to read the tumblers through that area.



19. The door cylinder contains all eight tumblers. You must remove the facecap to disassemble the cylinder. The replacement cap part number is ASP P-16-205.



Rear Hatch Lock

20. The rear hatch lock cylinder is similar to the door cylinder in many aspects.



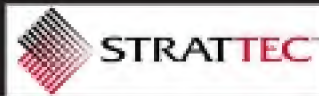
21. To remove the cylinder it is necessary to remove the inside trim panel. The panel is held in place by five exterior clips and several interior push-in style clips. Remove the exterior clips first and then gently pull outward on the panel to unfasten it.



22. Once the panel is removed it is easy to reach in the hatch panel cavity and remove the horseshoe clip that retains the lock cylinder in place.



23. The lock contains all eight tumblers. A replacement facecap is ASP P-16-205.

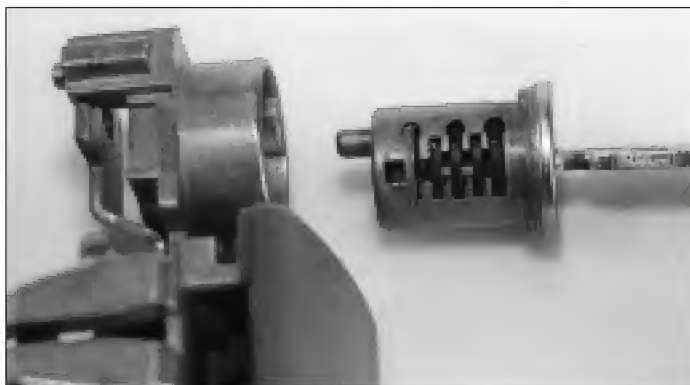


Glove Box Lock

24. The glove box lock assembly is held in the glove box door by two Phillips head screws. Remove the screws and remove the lock assembly.



25. To remove the cylinder plug it will be necessary to unsnap the plastic trim piece that encircles it.



26. Depress the plug retainer and slide out the plug. The plug contains tumblers in positions 5 through 8.

First Key Generation

Method 1. Check owners manual for code, written in by the dealer.

Method 2. Disassemble door cylinder or rear hatch cylinder and decode wafers to make master key.

Average Time 15-20 minutes.

Specifications

Code Series: Y & X 8000-9000


Key Blank: Ilco X123/DA25, X210/DA31 Silca DAT12, NSN11

HPC Card: CF67

MACS: 2

Cut to Cut: .083"

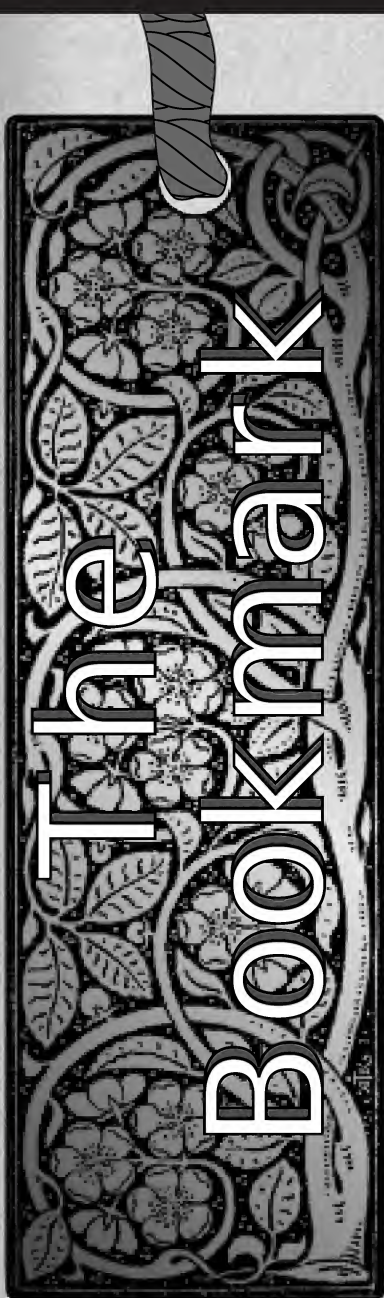
Shoulder to center of first cut: .118"

Depths: 1-.276", 2-.256", 3-.236", 4-.217" 

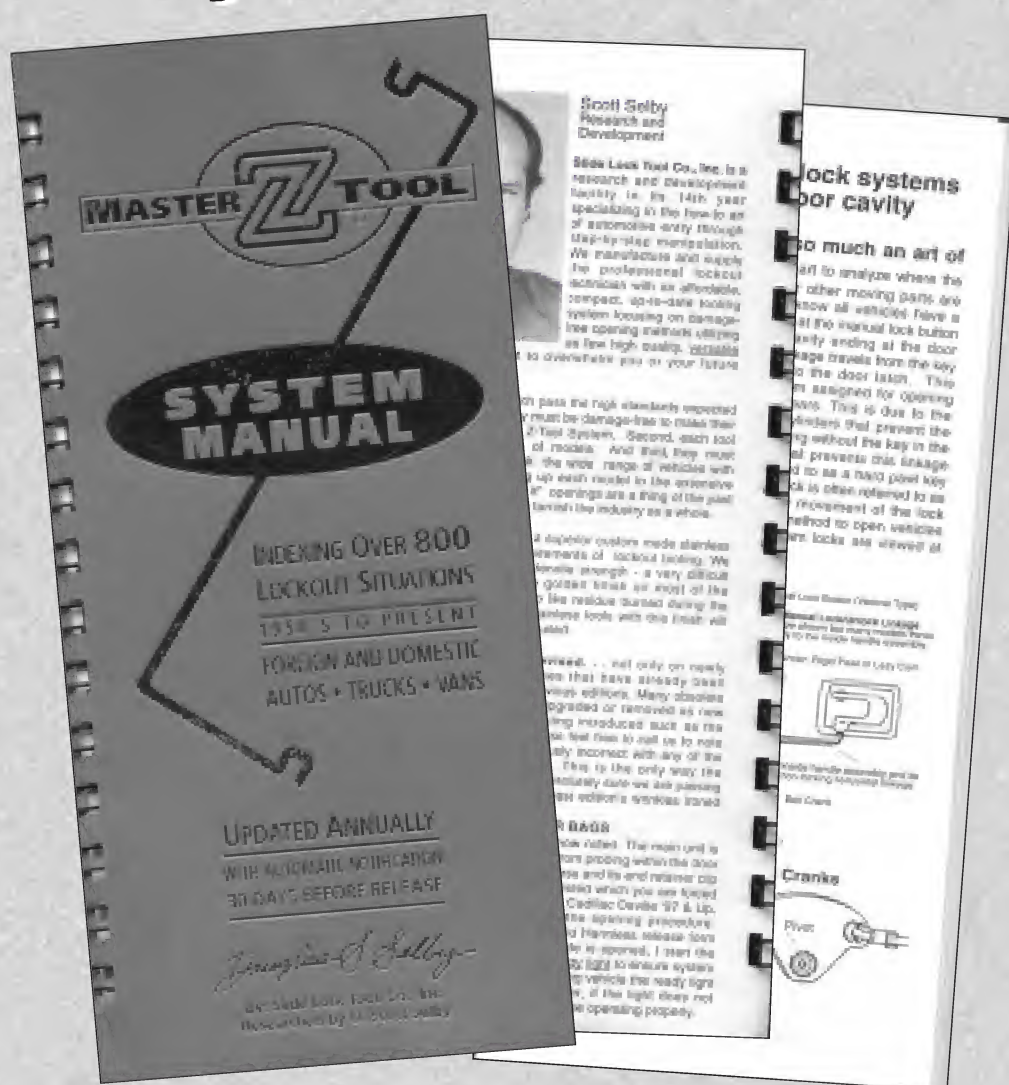


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Master Z Tool System Manual



A Monthly Review of Technical Manuals

The Master Z Tool System Manual covers over 800 lockout situations on foreign and domestic automobiles from the 1950's to present. The book is spiral bound in a 4-1/4 x 9-1/2 page format.

The manual is updated annually not only on newly introduced models, but on ones that have already been researched and published in previous editions of the manual. Many obsolete illustrated methods have been upgraded or removed as new knowledge is gained or as new tooling is introduced. The manual is a companion guide for use with the Z-Tool car opening device designed and developed by Slide Lock.

Throughout the Vehicle Index Guide, you will read "If Vertical" or "If Horizontal" beside the model name. This tells you the model name has had more than one type of lock system installed over the years. Essentially, the "If's" are alerting you to immediately identify which type of lock

system you are confronted with upon arrival to the job site. You must understand the classification of these two lock systems and the direction the linkage travels to utilize.

The Vehicle Index Guide is not only an alphabetical listing of makes and models referring you to appropriate opening methods. It is also where you'll pick up any helpful hints and/or variances from the standard instruction page assigned. When you see "but" after the method assignment page, expect to execute any number of helpful hints.

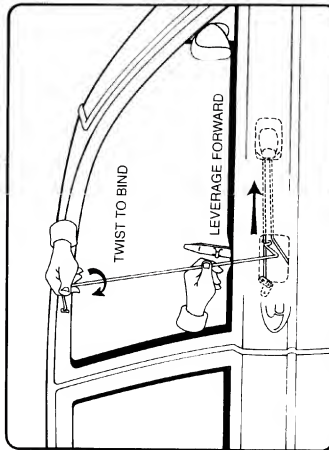
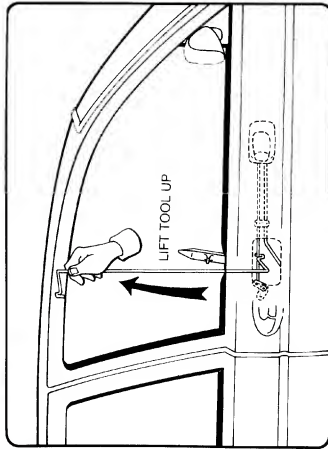
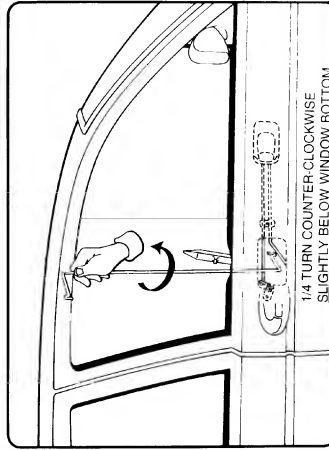
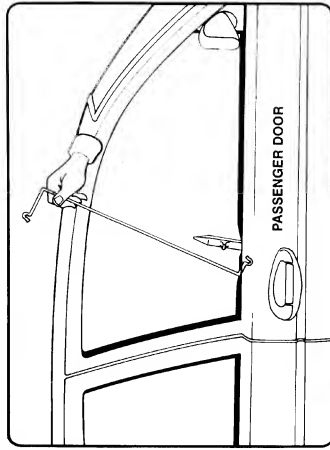
The Manual features illustrated line drawings to indicate vehicle locking linkages, many of which are in two color red and blue.

Suggested dealer price for the Master Z-Tool System Manual is \$42.50.

Slide Lock Tool Co., Inc. is located at 1166 Topside Rd., Louisville, TN 37777. Phone: 800 336-8812 Fax: (423) 577-5936.

The Bookmark

Sample Pages: Master Z Tool System Manual



TRUCKS / VANS / CARS WITH OR WITHOUT FULL LENGTH ANTI-THEFT WINDOW GUARD

15

Always refer to indexed vehicle guide before starting.

Place thick end of Flex-a-Wedge[®] between window glass and weatherstripping.

- If model has full length window guard, insert **LARGE** END of Z-Tool into the **felt-lined window frame track**, then push hook down into interior of door (ending as shown).
- If there is **no window guard** then insert near vertical linkage.

Notice: This method was originally developed to get past the window guards that extend the entire length of window. This method is also being assigned to cars without a guard. As you see in step #4 it is friction against the vertical linkage that makes this method work on many models. This method is assigned often to avoid the hazards associated with opening wing windows that often are present in the trucks and vans. Understand the general idea and you will use it often.

Stand tool straight up so the **MINI BOX HOOK** snakes around the steel anti-theft window guard.

Push tool down into door's cavity until below window bottom.

Turn handle **counter-clockwise** until contact is made with the vertical linkage. (Watch for manual lock button to slightly move upon contact).

Twist firmly **counter-clockwise** and maintain pressure against exposed vertical linkage as you slowly lift linkage to its unlocked position.

FORD Cars

ASPIRE 2dr. '94 thru '97
Refer to p. 15, but requires great side pressure on tool shaft while lifting vertical linkage to its opened position.

ASPIRE 4dr. '94 thru '97
Refer to p. 1. Pull back weatherstripping and look through glass bottom to view the short section of linkage exposed directly under manual lock button.

CONTOUR '95 thru '97
Read all Warnings: Do not attempt opening within the door cavities. Use new style **AutoBuster III** p. 19. **IF OUTSIDE AIR TEMPERATURE IS BELOW 45 DEGREES** the window becomes excessively tight due to contraction of the weatherstripping. Removal of the front passenger door's outside weatherstrip will allow ample space for easy entry. Warning: Do not bend weatherstrip during removal as it will easily deform beyond repair. A new part will cost about \$21.00.

Option A: Depress top of power switch if available.
Option B: Depress far rear of rocker type manual lock button.
Option C: Grasp and activate inside door handle. It is live but very difficult to activate. Use as last resort.

COUNTRY SQUIRE See Crown Victoria

Crown Victoria 2dr. '79 thru '89
IF vertical, refer to p. 1.
IF manual lock button does not move while probing, then refer to alternate method on p. 4.
IF horizontal, refer to p. 8.

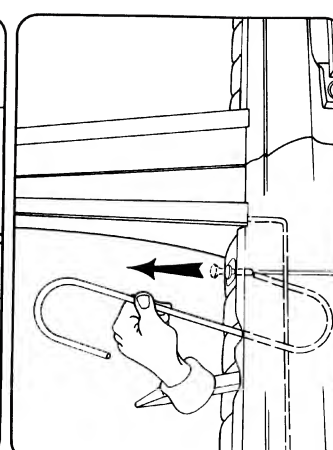
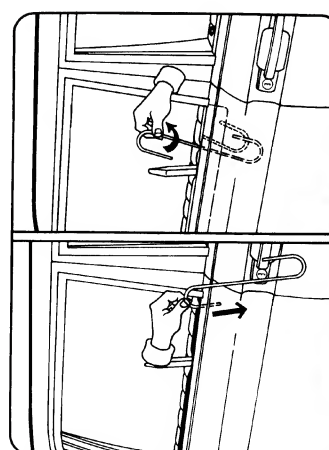
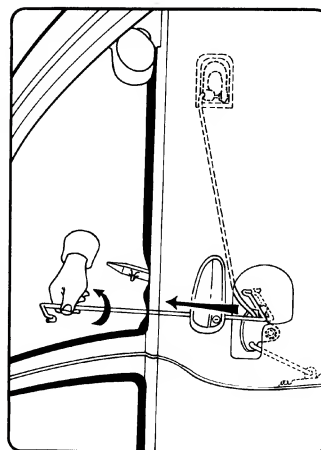
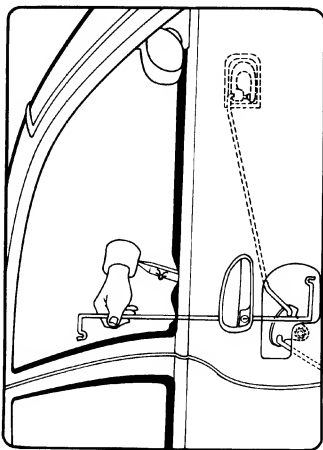
Crown Victoria 2dr. '90 thru '97
Refer to p. 15. First requires **Bend Chart A** located on inside back cover. Contact linkage high for good results. **OR** Use **Serpent Tool** p. 29B large end.

Crown Victoria 4dr. '83 thru '91
Refer to p. 1. You must slightly bow small end of Z-Tool shaft to better reach linkage at rear door.
OR Refer to p. 15. First requires **Bend Chart A** located on inside back cover. Contact linkage high for good results. **OR** Use **Serpent Tool** p. 29B, large end.

Crown Victoria 4dr. '92 thru '97
Refer to p. 1. You must slightly bow small end of Z-Tool shaft to better reach linkage at rear door.
OR Refer to p. 12B.

ESCORT '81 thru '90
Use small end of **Serpent Tool** p. 29B.

ESCORT all types '91 thru '97
Refer to p. 1. View short section of linkage exposed directly under manual lock button. Insert small end of Z-Tool within a few inches of button to better gain access to exposed linkage.
OR Refer to p. 12B. **OR** Refer top. 17. ... continue



Japanese Tool™

28A

1

Place thick end of Flex-a-Wedge as shown.

- Insert JAPANESE TOOL at location of vertical button until working tip is below window glass bottom.

REMOVE WEDGE TO RELIEVE INSIDE WINDOW PRESSURE.

Make slight counter-clockwise turn so working tip is in position to come up other side of window.

in one motion. Lift and Drag to left until working tip comes up other side of window glass (ending as shown).

• • • • •

2 Note: It is OK to twist the tool handle 180° to change the working tip direction even after the tip is up the other side of window. Be sure the window wedges are removed when you do this.

Guide working tip into position and lift vertical button to its unlocked position. Some plastic buttons will mar.

Lifting From Under Rear Door Latch

28B

Always refer to indexed vehicle guide before starting.

1

Place thick end of Flex-a-Wedge, between window glass and weatherstripping.

- Insert LARGE END of Z-Tool at the left side of REAR door's OPERATIVE window.

Pinch shaft 1 inch above the #3 depth guide and match with weatherstripping.

• • • • •

2

To make good contact with bell crank (as shown) maintain your depth guide while probing for bell crank. Eventually you will see the manual lock button move. Leverage up from under bell crank to open.

TOYOTA (Japanese)

All models are vertical, refer to p. 1.

Use Japanese Tool p. 28A.

Note: Remove the outside weatherstrip by pushing back small black plastic finish clip. Doing so allows you to see how little space is available to clear the felt inside weatherstrip. Be sure to insert tip of tool pointing to front of vehicle as illustrated at 28A.

Use Japanese Tool p. 28A.

Use new style AutoBuster III p. 19, but insert at front edge of rear door. Lube entry area and top loop of tool.

Use new style AutoBuster III p. 19, Lube entry area and top of tool as it is very tight at interior side of window. Note: No exposures within door cavity.

Refer to p. 1.

Refer to p. 1.

OR Use Japanese Tool p. 28A.

Refer to p. 26A. OR Good time to practice more difficult front door opening at p. 30A as the rear door's linkage exposure was shielded on models built after March 1993.

Use INVERTED Z-TOOL p. 30A.

Read method carefully before starting OR Use new style AutoBuster III p. 19, but insert at front edge of rear door. Lube entry area and top loop of tool.

Use new style AutoBuster III p. 19, but insert at front edge of rear door. Lube entry area and top loop of tool.

All models are horizontal, refer to p. 6, but insert small end of Z-Tool. (Some models leverage to rear of car.)

First requires Bend Chart A, then refer to p. 7, but leverage linkage to rear of car. Note: The linkage is very shallow within the door cavity.

OR Use new style AutoBuster III p. 19.

... continue

• 4-RUNNER '84 thru '89

• 4-RUNNER '90 thru '95

• 4-RUNNER '96 thru '97

• AVALON '95 thru '97

• CAMRY 2dr. '94 thru '96

• CAMRY 4dr. Up thru '88

• CAMRY 4dr. '89 thru '91

• CAMRY 4dr. and Wagon '92 thru March '93

• CAMRY 4dr. and Wagon April '93 thru '95 Confirm VIN#

• CAMRY 4dr. '96 thru '97

• CELICA '71 thru '85

• CELICA '86 thru '89



Safe Restoration

by Lynn A. Burman, CPL, CJ S

Welcome to safe refinishing and restoration. Over the next several months, I will take you on a step-by-step process of restoring an antique cast iron safe. Having grown up in a house full of antiques, with parents who's main form of entertainment was going to auction sales, I started restoring classic cars after a four year tour in Uncle Sam's canoe club. During my tour of duties I was in the corrosion control of the squadron aircraft (auto body for airplanes). After being discharged I had planned to spend my career doing auto body work, but we all know the story about the best laid plans of mice and men.

Here I am 15 years later, restoring antique safes. The safe I am going to restore and share with you was acquired from a building that was being gutted for asbestos abatement. When I arrived, I located my contact and he led me to the safe. The safe was repainted a bright blue and was locked up, (see Photograph 1). I believe this is an old Victor safe. To get the safe out, I did it the Egyptian way: I lifted it with a wrecking bar, put a pipe under it and rolled it out the door.

The next morning my wife and I put the safe on our two wheel dolly which is a 1200 lb. capacity appliance dolly, (see Photograph 2), and wheeled it out

to the van. The van has been modified so I'm comfortable hauling up to 2,000 lb. anywhere within a 150 to 200 mile radius from home. I replaced the standard 5 leaf springs with 9 leaf springs from a one-ton van, and have installed extra load tires all the way around.

The floor of the van is covered with exterior grade plywood to provide a smooth surface. To get the safes into the van we have installed a 2,000 lb. winch. This is bolted to my vise stand, which in turn is bolted through the floor of the van. The winch also has a remote control that allows most deliveries to be made by one person if needed, (see Photograph 3).

The ramps used to guide the safe into the truck are made from six inch wide channel iron which are seven feet long.



1. I believe this is an old Victor safe. It was repainted a bright blue and was locked up.



2. My two wheel 1200 lb. capacity appliance dolly is a must have item.



3. To get the safes into the van I have installed a 2,000 lb. winch, which has a remote control that allows deliveries by one person if needed.

We welded hooks to one end to attach to the bumper, (see Photograph 4). If I had it to do all over again, I would make the ramps eight inches wide to allow for a better safety margin.

After getting the safe back to the shop and up on blocks, we can now begin to examine it. It has no wheels, there are ears on the 70 number dial, and a T-handle. If you look close, you can see the door is paneled like a house door. There is also evidence that the safe has been drilled a few times before, and the holes were filled with body filler, (see Photograph 5).

Curiosity getting the better of me, I drilled out the first hole and inserted my MDS Focus Scope. I could see nothing! Oh well, let's try the other one. I still can't see anything. It must be "old age" catching up with me. I even tried using a light in one hole and scoping through the other, to no avail.

So far nothing is determined through these holes. Because I could not get any bind on the wheel pack while applying turning pressure to the handle and simultaneously turning the dial, that ruled out a straight tail



4. The ramps to guide the safe into the truck are made from 6 inch wide channel iron and are 7 feet long.

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5. There is also evidence that the safe has been drilled a few times before, and the holes were filled with body filler.



6. I drill at 50 just outside of the dial ring so as not to do any damage to it and bingo! the safe was open.

piece lock. I knew I had a three wheel gravity drop lock with either screw change or pin change wheels. I determined this

same combination at the opening index and the safe is open with no shaking of the dial, (see Photograph 6).

As you can see in Photograph 6, someone did some real creative

because each wheel picked up 10 numbers higher or lower than the wheel before it, depending on the direction you are turning the dial).

My inclination in this situation is to angle drill at 50. Experience says that it's a 50-50 chance of being on the money. I drill at 50 just outside of the dial ring so as not to do any damage to it and bingo! Although not at drop in, I can see all three wheels and the drive cam. I record the combination at the hole and then dial this



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7. The lock cover plate was custom designed by someone before me. There was a wood block that was used on the homemade lock cover, rather than the fire insulated insert.



repairs on this safe. The lock cover plate was custom designed by someone before me. There was a wood block that was used on the homemade lock cover, rather than the fire insulation insert that should have been there, (see Photograph 7). We will rectify that during the restoration.

To make matters even worse, if you look close at the lock in Photograph 8, you can see the driver is missing approximately one third of its circumference. I have no idea why someone would have done this, (see Photograph 9). All I know is

someone sure exhibited some creative repair techniques, which I don't recommend you emulate.

Now that we have the safe open and we know what we are dealing with, in the next installment we will begin the restoration process by taking the safe apart for plating and stripping. See you then. **TNL**



8. If you look close at the lock you can see the driver is missing approximately one third of its circumference.

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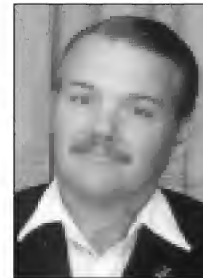
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BEGINNER'S CORNER

Profile Cylinders



by
**Jim
Langston**

Profile cylinders are used in a variety of applications which are commonly found on glass storm doors as well as wooden doors. They are available in a number of keyways and many are rekeyable through the bible of the cylinder with removable Allen

screws. Others come apart from the center of the lock by removing the cylinder cams. We will be covering both the removal and rekeying procedures of these locks.

Profile cylinders are available both as a single cylinder and a double

cylinder (see Photograph 1). The first thing you need to do to remove most Profile cylinders is to remove the set screw on the side of the locking unit (see Photograph 2). This will allow the cylinder to be removed from the lock housing (see Photograph 3).



1. Profile cylinders come in both a single and double cylinder version.



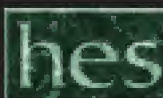
2. Remove the set screw on the side of the locking unit.



3. The cylinder can now be removed from the lock housing.



4. If hard to remove, the cam in the middle of the lock might be sticking out on one side.



5. Remove the screws on the top of the bible.

It should come out very easily. If not, you may have to turn the key in the lock one way or the other to remove the cylinder because the cam in the middle of the lock might be sticking out to one side (see Photograph 4).

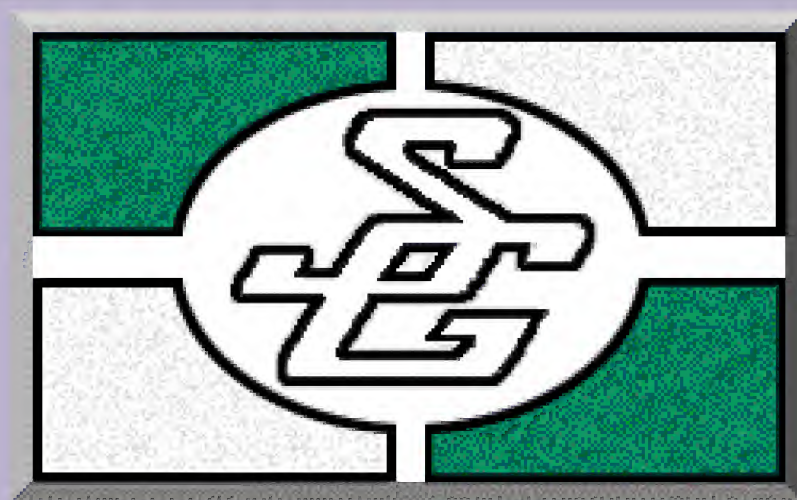
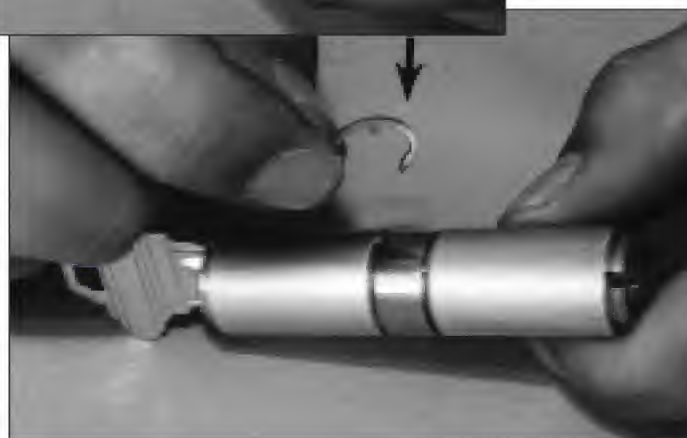
Now that you have the cylinder in your hand, you can use an Allen wrench and remove the screws on the top of the bible (see Photograph 5). Next remove

the springs and top and bottom pins (see Photograph 5).

Since you don't have to remove the plug to rekey this lock, I suggest you pin one chamber at a time. If the key works, place the

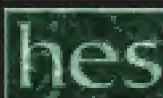


6. Remove the "E" clip from the middle of the lock.



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7. Buy small magnetized followers supplied by KEEDEX to inch the plug out.



8. You can make your own followers out of a half inch wooden dowel rod.

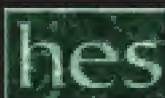


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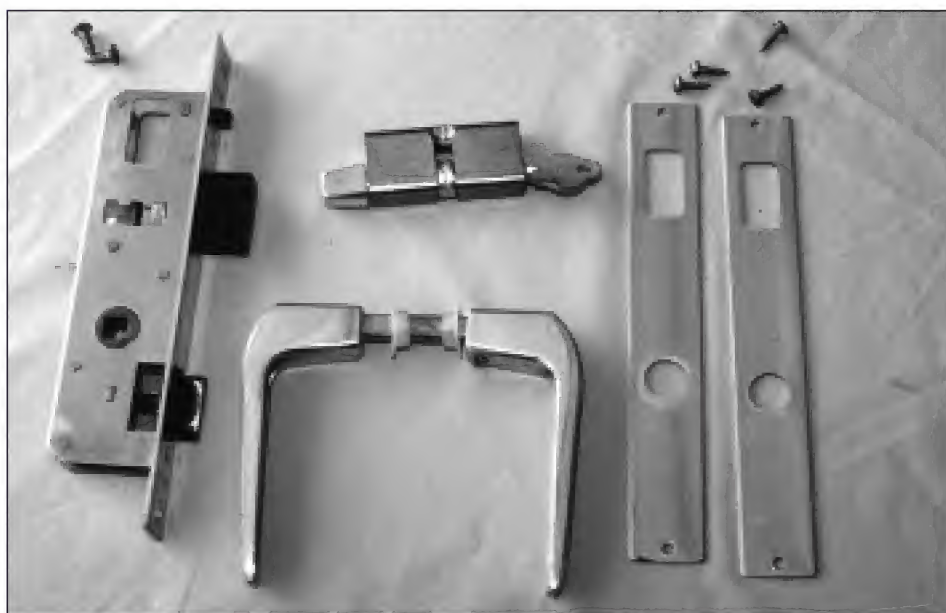
Allen screw into that chamber. Do the same in each chamber. These cylinders can also be master keyed just as any other lock.

Next we will cover a Profile cylinder that has no screws in the bible. To key this cylinder you must take it apart by removing the cam.

The first thing to do is to remove the "E" clip from the middle of the lock on both sides of the cam (see Photograph 6). Now, insert the key and turn a quarter of a turn to one side and move the plug outward just a little. Do this on both sides of the lock. Now remove the cam in the middle. It should come out very easily.

The plug is now ready to be removed. To remove these plugs, you must have a follower to push the plug from the center of the lock outward. To accomplish this you can buy small magnetized followers supplied by KEEDEX to inch the plug out (see Photograph 7).

You can also make your own followers out of a half inch wooden dowel rod. Cut the dowel rod so that it will fit into the lock housing from the middle. Push it in and insert



9. This lock comes with all of the parts you see here.

another one until you have the plug all the way out of the lock housing (see Photograph 8). Rekey the lock plug and put it back together in the reverse order.

The lock used in this article is a Pado lock made in Brazil. This lock comes with all of the parts you see in Photograph 9.

You will encounter Profile cylinders on a fairly regular basis. At first they can seem difficult to service, but once you become familiar with their design and characteristics, they will become no more difficult than any other lock.

- Point To Ponder -

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DIE, GSA, DIE!



Every once in a while, you, the professional safecracker meets an opponent that will give you a good workout, and make you rethink your priorities as a virtuoso safe technician.



by Dale W. Libby, CMS

Such a monster is the unit in Photograph 1. It happens to be a Class 4 Diebold GSA unit with a one hour fire rating. In addition, there is an S&G 8400 manipulation proof Group 1 lock. You know, the one with the little butterfly in the center of the hub. After dialing the combination, the dial is returned to the zero position, the dial is held steady and the inner 'butterfly' is turned to allow the lever fence to drop into the wheel gates.

On the bottom of this two drawer legal sized filing cabinet was the decal that states that this unit weighed 630 pounds. This is a foible of GSA units. They will either have the weight embossed on the unit, or will have an oval plate attached with the weight of the unit.

The unit was owned by a private photographer who wished to keep his cameras in a safe place. He could not have picked a better place. There is a lot of controversy about how to attack a unit with an S&G 8400 installed. It hinges on either hole sawing the dial and leaving the hub and butterfly intact, or breaking off the dial with a vice grip pliers. Both attack methods have their own merits and I will discuss both the good points and the bad points of both methods. In the McOmie Penetration Party book, page 150, it shows an attack on this lock by breaking off the dial. On this Mosler round door unit, the dial broke off flush with the surface of the bearing plate. By removing the bearing plate, a 1/2 inch or so of the outer spindle was

exposed allowing easy turning of both the wheels and the inner spindle.

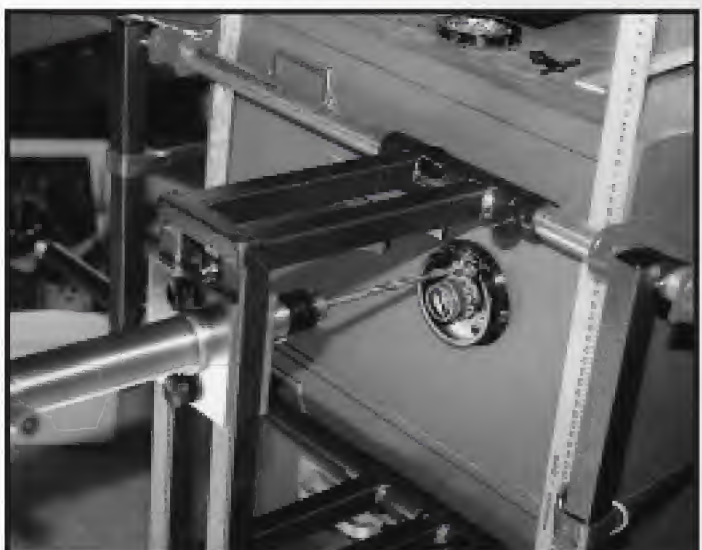
By breaking off the dial and spindle, there is the added factor that a fixed drill rig, like the Strong Arm Mini-rig can be installed using the dial ring mounting holes or other methods of attachment. If you do not remove the dial, then either a lever rig or an external mounted drilling rig must be used to get through the diabolical and formidable matrix hard plate that is used to protect the lock and inner mechanisms.

In Photograph 1, you can see that I opted to remove the outer dial ring and keep the hub and butterfly intact. Although, if I had removed the dial and ring (as Dave suggests), my opening would have been much faster and easier, for someone else had previously drilled out one of the upper mounting screws for the combination lock, and did not repair or replace the hardplate. If I had removed the dial and ring completely, I would have seen the previous penetration, and I could have gone through this prior hole.

My first 13 drill bits were shredded by the cookie dough carbide chip 3/8 inch hardplate. I drilled and smashed the hardplate between



1. Diebold GSA container with S&G 8400 series Group 1 manipulation proof lock mounted horizontal left.



2. Magnum 457 drill rig clamped and strapped to safe.

Continued from page 54



3. Unit penetrated and getting ready to use mini-scope set up.

attempts, and finally got through the first 3/8 inch layer of hardplate. This hardplate was beautiful with gold coloring amidst the hardplate chips. Very hard to get through.

There are advantages of the lever rig. It is fast and easy to set up. Just attach a chain to the handle of the unit, adjust the length of the lever, and drill. Unfortunately, the downside of a lever rig is that it really takes some technique to get it right. With the wrong technique, you will not get good penetration, and you will use too many drill bits.

The beauty of a fixed rig, when drilling with carbide, is that for the most part, any one can easily do it. Technique is not such an important factor when using a fixed rig. Constant drilling pressure and alignment can be maintained without the loss of drilling pressure.

The best thing about a fixed rig, is that you will not accidentally drill into the lock case after the hard plate has been penetrated, welding two or three of the wheels together. With the fixed rig, pin point accuracy is not that hard to accomplish.

Not being able to remove the dial and ring, I chose an old standard drill rig that I only use for nasty hardplate when I have a limited number of drill bits to play with. I dusted off my 15 year old 457 Magnum drill rig

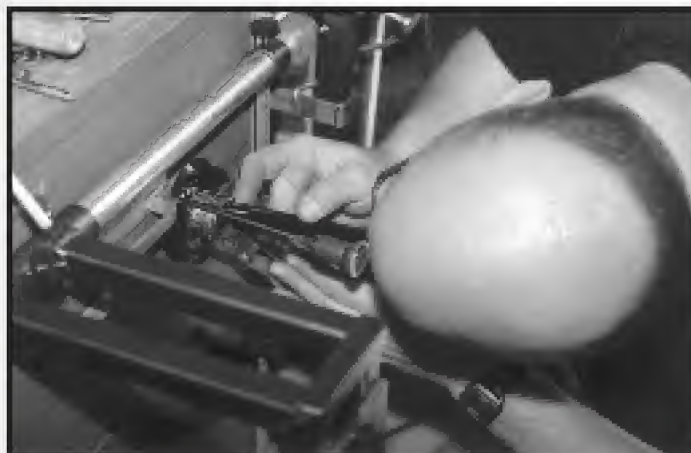
and clamped it to the unit. The set-up can be seen in Photograph 2.

In short order, I was able to penetrate the second 3/8 inch carbide included matrix hardplate with only three 5/16 inch Strong Arm Drill bits. I love when swirls of hardplate material comes spiraling out the penetration hole. It makes the set up of the

Magnum worth while. Now, I wished I had used it for the first hole too.

Total time to this point was about 3 hours, with most of the time being taken up with the first hole. Once the hole is made, the wheel gates can be viewed and the readings correctly transferred to the precise drop-in position, which was about 97 in this lock. I drilled at 92 and transferred the wheel pack 5 numbers to the drop in zone at 97. The main reason for this was that I did not want to necessarily bugger up the upper dial ring mounting screw hole.

Paul Butler, of MDS Focus Scope Fame, gave me a new inexpensive scope to try on my next safe opening. It is an interesting scope. The lens is a gradient type lens without the fiber optic bundles wrapped around the outside of the scope. In Photograph 3, I am inserting the scope in my drilled hole. The end of the scope has a 24 degree sweep at the end which allows for angle viewing.



4. Dale using mini-scope successfully to dial unit open.

The light is supplied with a an angled high intensity flashlight held to the side of the scope. Photograph 4, shows the placement of the scope, and me actually viewing the gates and the fence inside the lock case. The huge bright thing in the picture is the top of my head, not the comet Hale-Bopp. By moving the light, different illuminations and shadows can be created to make the viewing of the wheels easy.

The breakthrough with this scope setup is that it sells for less than \$200.00, for both the scope and flashlight. If you do not want to get into expensive scopes, this would make a great first start and beginner scope. It had a few limitations, but for the money, it is a good unit to use, especially on GSA units.

After dialing the combination five numbers to the right, the dial turned to zero, the butterfly turned, the center handle lever popped up and there was another decal that said "OPEN" underneath. Whew, a real killer at 4 hours to open.



5. GSA repaired with LaGard 3300 combination lock.

Photograph 5, shows the repaired unit with a LaGard 3300 combination lock. The inner door of this unit had welded angle hard plate over all the operating parts and levers. The lock sits nestled in layers of hardplate protecting all sides of the lock. The customer was so impressed with the show I gave him, he added a \$100.00 tip at the end. (I needed it.)

Stars of this article include:

Strong Arm Security Drills:
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MDS Mini-Scope: (813) 653-1180

Lockmasters Magnum 457:
(800) 654-0637

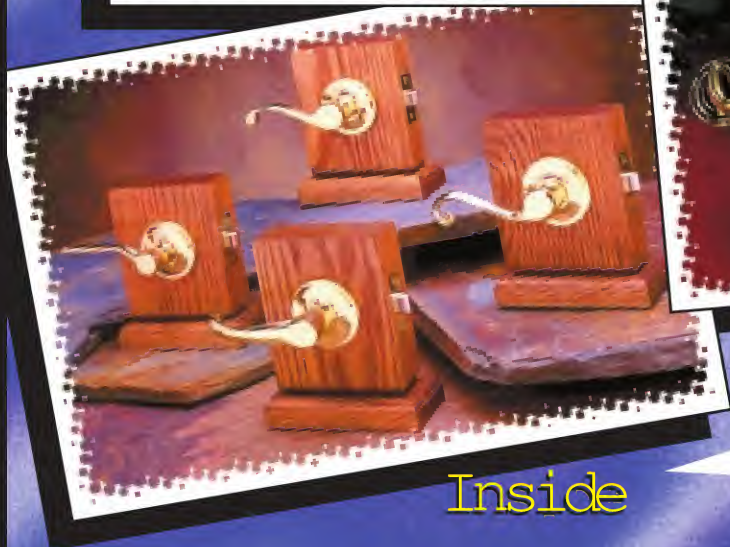
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The National Locksmith®

A Bonus Supplement Issue of
DHI

September 27-29, 1997

**Charlotte
North Carolina**
The National Locksmith



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Welcome To The Show!

Welcome to the 22nd Annual Convention and Trade Show of the Door and Hardware Institute. This special issue of The National Locksmith is the tenth annual issue designed to bring the locksmith specific important news in the world of architectural and builders' hardware.

The theme for the convention is "Targeting Tomorrow's Teams." Meaning: Businesses must aim to help their employees pull together into cohesive/ successful teams in order to thrive in the marketplace of tomorrow.

The convention will take place over three days (September 27-29) in Charlotte, North Carolina at the Charlotte Convention Center.

Charlotte is a world-class city on the move. It boasts a wide array of sporting events, arts and entertainment, shopping, dining and a variety of attractions. It is also accessible to more than half of the U.S. population who live within a two-hour flight.

This issue contains booth listings for the convention. Also included on the following pages is our Product Showcase, presenting a wide range of product either being exhibited at the show or of interest to the industry.

For more information on the products in this issue you can circle the product's number on the Rapid Reply card, or send your request via E-Mail to The National Locksmith at natlock@aol.com. Fax: (630) 837-1210.

If you have any questions regarding the show, including points of interest at the show or other things to see and do while you're in Charlotte, you can contact DHI at (703) 222-2010. Fax: (703) 222-2410. They can point you in the right direction. E-mail: publications@dhi.org; website: www.dhi.org.

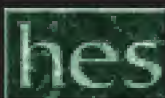


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PRODUCT SHOWCASE

DHI - September 1997

NT Dor-O-Matic Astro-Fold



In response to demands for a commercial-grade door that could accommodate two-way traffic while reducing opening requirements, NT Dor-O-Matic developed the Astro-Fold automatic door.

The Astro-Fold automatic folding door utilizes safe and durable swing door technology while minimizing traffic concerns and visually opening the architectural appearance of the building entrance. The NT Dor-O-Matic door system operates with smooth, swing-type action and allows adjustable opening and closing speeds. Each folding door section parts and closes at the same time and is powered by a full-size heavy duty door operator.

Weiser Lock's Radio Frequency Powerbolt

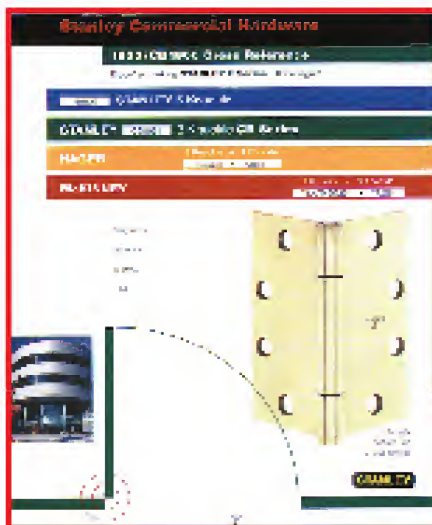
For the first time, homeowners will be able to use one small, hand-held remote control to perform three separate home security functions. That capability will arrive when Weiser Lock introduces its radio frequency remote control version of the Power-bolt Electronic Keyless Entry System.

Small enough to carry in a pocket or a purse, the new version of the popular Powerbolt is the world's first remote



control that connects the homeowner's garage door opener, home door locks and indoor and outdoor lighting system.

Stanley CB1900 Cross Reference Slide Chart



A new, easy way to use, cross reference slide chart on the CB1900 3 knuckle hinge has just been released by Stanley Commercial Hardware of New Britain, CT. The chart is designed to assist in the selection of Stanley 3 knuckle CB1900 hinges by cross referencing them to Stanley 5 knuckle hinges and other manufacturers' 3 knuckle and 5 knuckle hinges.

The CB1900 hinge by Stanley is designed to last for the life of the building — and is backed by Stanley's LifeSpan Warranty.

700 Series Hotel/Motel Door Closer with delayed action

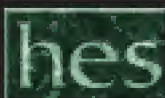


Taymor's 700 Series Hotel/Motel Door Closer with delayed action is available in "Regular Arm" or "Parallel Arm" applications. This door closer is ideal for guest rooms and allows easy entry/exit when luggage is being carried in or out of doorway. UL listed with a 5 year guarantee.

SDC Entry Check Provides Flexibility in Multi-Door Control



Security Door Controls (SDC) Entry Check 990 Access Management System is an economical multi-door control and monitoring network system. The distributed intelligence of



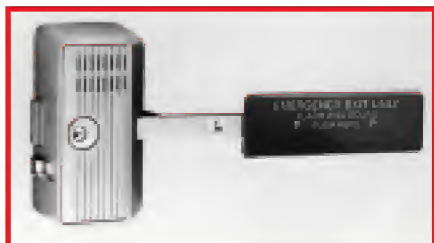
the SDC 990 (each reader stores its own program) insures a highly reliable and functional system capable of utilizing both single stage and two-stage readers without requiring a personal computer. In addition to providing easy, low-cost installation with centralized data base programming, the SDC 990 supports up to eight (8) reader and/or pinpad configurations including Wiegand, Proximity, and Magnetic Stripe technologies.

Olympus DCR Cam Lock

The new Olympus DCR cam lock is yet another addition to Olympus Lock quality, innovative and patented rekeyable line of cabinet locks. The DCR Cam Lock has combined quality, dependability and style. The ease of rekeyability is due to the patented retaining clip that and removable pin cover. To rekey the DCR, just simply remove the retaining clip and remove the plug. Truly the easiest cam lock to rekey on the market.

The Olympus DCR Cam Lock is supplied with reversible straight and offset cams (only 2 cams required compared the standard 6 cams required by other manufacturers) and a new anti-rotation plate.

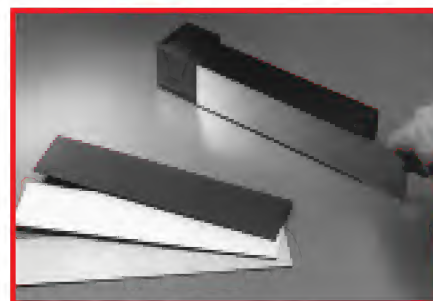
Alarm Lock SirenLock Model 250 Panic Exit Device



Alarm Lock Systems' presents the SirenLock Model 250 panic exit alarm deadbolt device, which restricts unauthorized use of exit doors by sounding an alarm, while still providing instant egress in the event of an emergency. For added security, the Model 250 feature a deadbolt and deadlatch, which meets all relatching requirements, and is ruggedly designed for years of reliable, trouble-free use. Alarm Lock's SirenLock Model 250 offers dependable protection and secure monitoring of exit doors in schools, colleges, retail centers, and various places of business.

J LM Stocking Locknetics

J LM Wholesale is pleased to announce that they are now stocking the 2000 SuperMag by Locknetics Security Engineering. This is the very first direct pull magnet able to provide 2000 pounds of holding force within a standard size housing. The 2000 Series is designed for the toughest systems application; it can interface with elec-tronic, access control systems, auto-matic door operators, and fire or other hazard sensing systems providing egress as soon as an emergency is detected. This Fail



Safe design has no moving parts, an excellent answer to security and life safety requirements when connected to the fire alarm circuit.

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Commercial Grade 2 Locksets from Design House

Design House, Inc. expands its extensive quality-driven lockset line with the introduction of the Commercial — Grade 2 series in a View pack. Grade 2 locks, available in levers, knobs, and deadbolts, are manufactured in bright brass and stainless steel.

Grade 2 locks are specifically designed for light commercial use and are ideal for office buildings,



hotels, motels and common areas of residential buildings.

Trine Offset Strikes for Mortise Locks



Newest Trine EN Strikes are the "430" and "435", specifically designed for mortise locks. Since many lock manufacturers position deadbolts, latchbolts and auxiliary latch elements differently,

Trine offset strikes have been designed to adapt to such situations.

The new strikes contain important features such as all stainless steel construction, no external solenoid, will accept 1" throw, 2000 lb. UL tested holding force, 1,000,000 life cycles, architectural finishes and UL listing 10B for Class A 3 hour single swing doors and 1034 burglary resistant for indoor and outdoor use.



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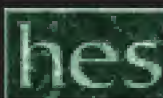
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Securiton Induces New Releasing Device For Electromagnetic Locks



The UL Listed Touch Sense Handle, from Securiton, releases the electromagnetic lock and signals any alarm or access control system by the simple act of

touching or pushing on the handle. The TSH complies with the "no prior knowledge or special tools" egress requirements. The "no moving parts" technology means years of reliable use. It is a perfect solution for electromagnetic lock release on in-swing doors or where a traditional exit bar is not appropriate or desired.

The Model TSH comes complete with reversible handle, offset spacer, electronics, 16 feet of cable and door cord, and engraved plates designating PULL/PUSH and blank plates in both gray and black.

Special-Lite, Inc.

Champagne anodized entrances are bright, exciting and inviting — just the opposite of dull dark bronze. Special-Lite, Inc. recently began stocking Class I Champagne color anodized aluminum to offer quicker delivery of entrances and encourage



greater use of this gorgeous material. Special-Lite champagne is noted for excellent color match from lot to lot.

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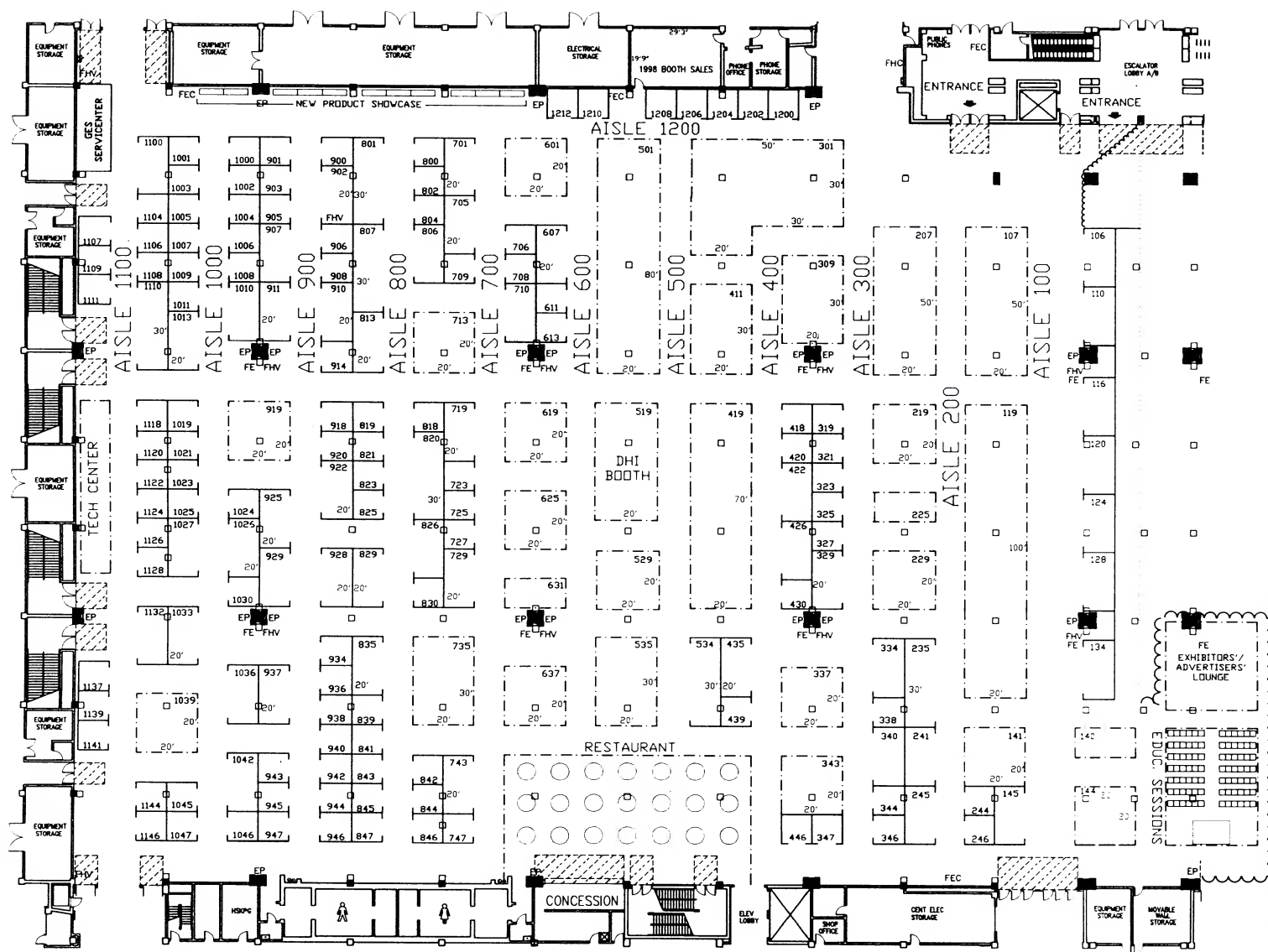
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Booth Listings

COMPANY BOOTH

A & J Washroom Accessories, Inc.	830
A & L Shielding Inc.	920
AJ Manufacturing Co. Inc.	944
ABH Manufacturing, Inc.	802
Access Technology, Inc.	906
Accurate Lock and Hardware Co.	323
Ace Lock and Security Supply.....	1124
Action Hardware.....	1139
Adams Rite Manufacturing Co.	713
Alarm Lock Systems, Inc.	124
Algoma Hardwoods Inc.....	435
Almet International	709
Ambico Limited	1118
American Specialties Inc.	116
Ampco Products Inc.	914
Amweld Building Products, Inc.	229
Anemostat Door Products	607
Apex Machine Works Ltd.....	1005
Architectural Control Systems Inc.....	729
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Asterix Security Hardware Intl, Inc.	1011
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NT Monarch.....	501M
NT Quality	501Q
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Overly Manufacturing Company.....	1144
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Rajack Design LTD Subsidiary of Rajack Brass	905
Reese Enterprises Inc.	706

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V.T. Industries Inc.....	801
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WoodfoldMarco Manufacturing Inc.....	225
Woodtech Trading Co., Inc.....	1003
Yale Security Inc.....	119
Zero International Inc.	818



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Cam & Cabinet Locks

by
Sal
Dulcamaro



When we want to secure something other than a standard walk through door, a regular deadbolt, knob or lever handle locks just won't fit the bill. A hazy category, sometimes called auxiliary locks, usually includes a variety of cam, drawer and cabinet locks. When you see locks attached to cabinet doors and drawers, it is quite common to discover that the majority of them tend to be of the disc tumbler variety. From the standpoint of pick resistance, most disc tumbler locks will not compare well to pin tumbler locks.

If you are looking for a reliable source of easily serviced pin tumbler cabinet locks, you might want to check out Olympus Lock or Kenstan Cabinet Locks. Olympus Lock makes a wide variety of cam and cabinet locks that can be broken down into three general categories: small pin tumbler, large pin tumbler and interchangeable core. Adding to the higher level of security of a pin tumbler lock over a disc tumbler lock, the locks are designed to be very easily rekeyed and quite versatile.

When it comes to specialty or cabinet locks, Kenstan Lock Company has an interesting mix of products. The variety of door, drawer and showcase locks range from the

relatively low security (and less expensive) disc tumbler lock versions, to a resettable tubular lock and Medeco sidebar lock. The range of products allows you to serve customers whose concern is merely low cost, and those who are willing to pay extra for greater security or key control. At the same time, you are able to get re-keyability and compatibility with standard cabinet lock installation dimensions. I won't be discussing the entire product line of either Olympus or Kenstan Lock, but instead I'll cover a cross section plus some basic serving information on both.

OLYMPUS LOCK - THE REKEYABLES

Small Pin Tumbler Locks

Photograph 1, shows one of many different small pin tumbler locks made by Olympus Lock. It is the Square Back Door Lock (Part #100DR). It uses the National D4291 four or five pin keyway. All of the small pin tumbler locks from Olympus Lock use either one of the CCL or National Cabinet Lock keyways.

The 100DR is easily serviced by loosening the screw (see Photograph 2) and removing the cylinder from the tube. There is a slide cover at the top of the pin chambers, so the plug need not be removed to rekey the lock. This can be especially helpful if you need to master key a group of cabinet locks. The plug can be removed, if necessary, just as easily by removing a "C" clip at the back end of the lock cylinder.

Photograph 3 shows the DCN4 Reversible Cam Lock- National Keyway. The lock is easily rekeyed because of its unique combination staple and slide cover. With the

**Continued on page 74
(DHI page 14)**



1. One of many different small pin tumbler locks made by Olympus Lock.



2. The 100DR is easily serviced by loosening the set screw and removing the cylinder.

Continued from page 72
(DHI page 12)



3. The DCN4 Reversible Cam Lock- National Keyway.

staple pressed in place, the slide cover is blocked from sliding back to expose the pin chambers. The staple has been lifted in Photograph 4, which will allow the slide cover to slide backward.

Photograph 5, shows a back view of the lock with the Stabilizer Plate slid over the back. The Stabilizer Plate is a definite advancement over the locking type washers that come packaged with most other type cam locks. The plate keeps the lock

secured in position on a drawer or door without the normal tendency to rotate out of position or be easily forced open.

The Olympus Lock cam locks make use of a unique cam assembly which allows the key a full 360 degree rotation while the cam only rotates 90 degrees. That allows the key to be pulled with the cam in two different positions, while the key pull position remains at 12 o'clock for both cam positions.

4. The staple has been lifted which will allow the slide cover to move.



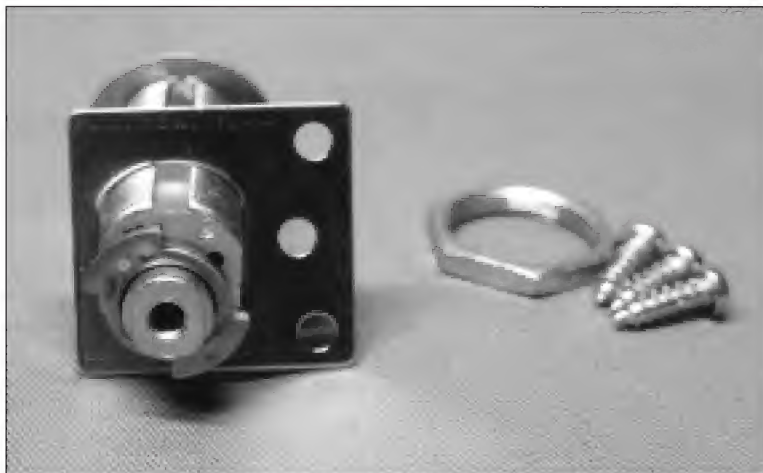
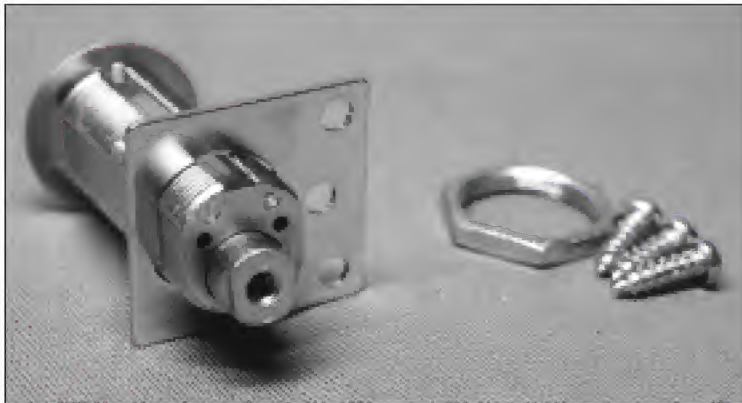
Photograph 6, shows the first of three parts of the cam assembly. The cam stop can be inserted with its press fit pin inserted into one of two drilled holes in the back of the lock case. They are identified with raised numbers as positions "1" or "2." The cam stop is currently assembled at position 1. The number "2" can barely be seen above the unused hole to the right. The "1" position is for right



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5. A back view of the lock with the Stabilizer Plate slid over the back.



6. The first of three parts of the cam assembly.

hand vertical and left hand inverted use. The "2" position is for left hand vertical and right hand inverted use.

Large Pin Tumbler Locks

Olympus Lock makes a similar variety of drawer and cabinet locks that use standard commercial cylinder style pin tumblers. Although convertible to other keyways, the large pin tumbler locks come compatible with the Schlage "C" keyway. The small pin tumbler locks require a 7/8" diameter bored hole through the drawer or door. The hole required for the large pin tumbler locks is the slightly larger diameter of 1-1/8 inch to fit the larger size commercial style lock cylinder.

Photograph 7, shows the Schlage "C" Keyway Door Lock (Part #700SC). Just below the lock is a couple of spacers to adjust for different thickness doors or drawers. Similar spacers are available for most of the other Olympus Lock cabinet locks, including small pin, large pin and IC. Like the small pin locks, a small phillips head screw holds the cylinder inside the lock body.

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**7. The
Schlage "C"
Keyway
Door Lock**



If you look at Photograph 8, you'll see what appears to be a typical Schlage key-in-knob cylinder. It actually isn't, because it uses a special driver and washer combination to work with the lazy cam action (see Photograph 9). With the cylinder out of the lock body, it services just like a standard Schlage lock cylinder for keying or master keying.

If you wish to set up cabinet locks with commercial keyways other than the Schlage "C," your best bet is to use a Lori 1531 replacement plug. Lori makes plugs for almost a dozen different commercial keyways that will fit into a Schlage commercial knob style cylinder shell.

Interchangeable Core Locks

Olympus Lock also makes a wide variety of cabinet locks that make use of Best style interchangeable cores, and a few that work with Corbin/ Russwin interchangeable cores. These locks can be used quite effectively for a customer that wants all the desk and cabinet locks coordinated with the door lock hardware. An office worker could potentially have a key that not only opens the office door, but the desk drawers and cabinets, too.

Photograph 10, shows the IC Rim Latch Lock (Part #725RL). This lock is a spring latch variety that operates with a Best style IC.

Olympus Lock makes a similar lock with a deadbolt instead of a latch. There are also mortise versions of both the latch and deadbolt style interchangeable core cabinet locks. Like the large pin tumbler cabinet locks, larger than standard holes have to be drilled into cabinet doors or drawers to accept these locks. IC locks are also available in a cam lock, sliding door lock and mail box lock. Like the other IC cabinet locks, oversized installation holes will generally be required.

The Convertible

Most of the cabinet locks from Olympus are designed to be either desk or drawer. One exception is the Reversible IC Door & Drawer Lock (Part #721DR or 721DW) (see Photograph 11). This one has started out as the door lock style with the bolt moving side to side.

The lock is convertible back and forth from either door or drawer lock with parts that are already assembled

**8. What
appears to
be a typical
Schlage key-
in-knob
cylinder
actually
isn't.**



**9. It uses
a special
driver and
washer
combination
to work with
the lazy
cam action**





10. The IC Rim Latch Lock.

into the lock and a few spare parts included in the lock package. This is the only lock from Olympus (to my knowledge) that is field convertible from door to drawer or vice versa.

KENSTAN CABINET LOCKS

When it comes to specialty or cabinet locks, Kenstan Lock Company has an interesting mix of products. The variety of door, drawer and showcase locks range from the relatively low security (and less expensive) disc tumbler lock versions, to a resettable tubular lock



11. The Reversible IC Door & Drawer Lock.

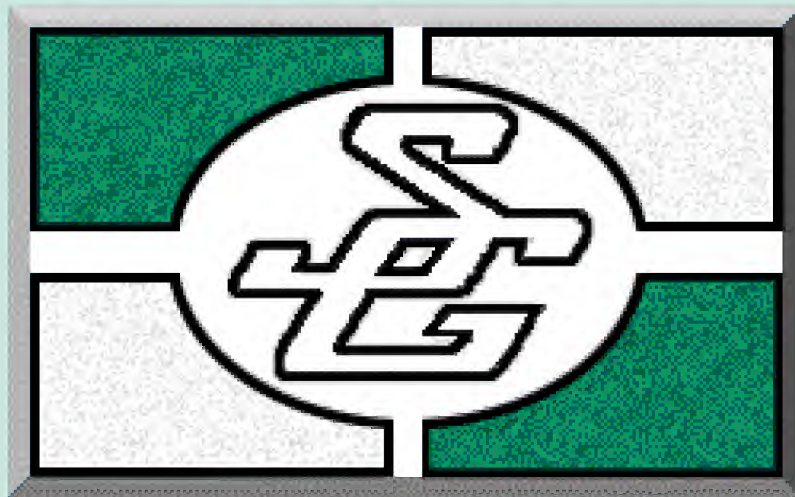
and Medeco sidebar lock. The range of products allows you to serve customers whose concern is merely low cost, and those who are willing to pay extra for greater security or key control. At the same time, you are able to get rekeyability and compatibility with standard cabinet lock installation dimensions. I won't be discussing the entire product line, but instead I'll cover a cross section plus some basic serving information.

Drawer Locks

Photograph 12, shows three different drawer deadbolt locks from

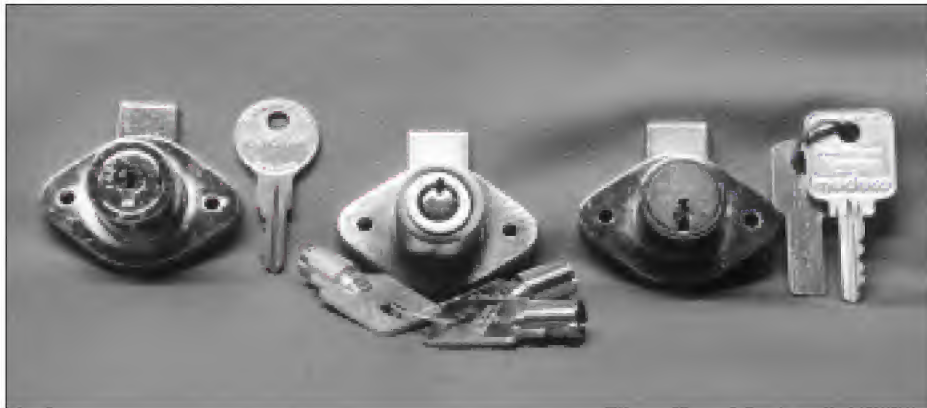
Kenstan. At the left is the disc tumbler version. In the middle is the resettable tubular lock called the KeyMatic, and at the right is one that uses a Medeco sidebar cylinder. All three have the same basic dimensions and are interchangeable from an installation standpoint. Obviously, they are not the same when it comes to security and cost.

Photograph 13, shows the K21 disc tumbler Drawer Dead Bolt. The 13/16" diameter barrel is standard size and should fit as a replacement for most common brand "diamond"



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12. Three different drawer deadbolt locks from Kenstan.



13. The K21 disc tumbler Drawer Dead Bolt.

shaped drawer locks. The lock is easily rekeyable. An access hole at about 3 o'clock on the outside circumference of the plug is the key to disassembly.

With the key rotated one quarter turn counterclockwise the access hole will move to the 12 o'clock position where the casting in the lock shell has an open space where the disc tumblers lock. In Photograph 14, the wire tool is inserted. When the wire is pushed in, the retainer tumbler is pushed downward into the plug until the plug is free. The plug has been pulled almost half way out in the picture. Once the plug is out of the shell, it can be rekeyed or the key retaining function can be changed.

The KeyMatic Family of Locks

A tubular key style desk lock is shown in Photograph 15. It has the same installation holes and dimensions as the disc tumbler lock, but it is no ordinary lock. It is the KM 21 KeyMatic Drawer Dead Bolt which is a user resettable lock with eight built in key combinations. If you look at the face of the lock, you will see the numbers 1 through 8 running

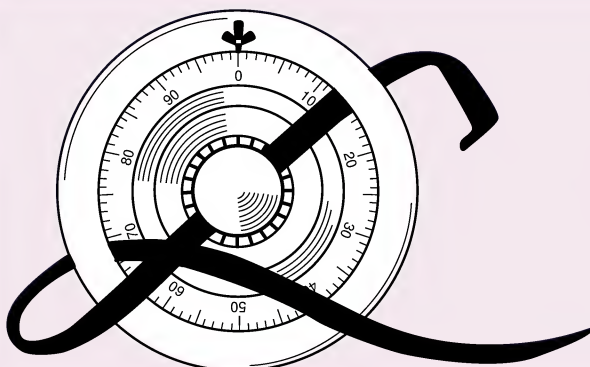


14. When the wire is pushed in, the retainer tumbler is pushed downward into the plug.

clockwise starting at the very top. Those markings are used in conjunction with a special gold colored change key to reset the lock to operate with different keys.

Photograph 16, shows an operating key at the left and a gold change key at the right. The operating key has a bit at the front end of the key at the

Continued on page 80
(DHI page 20)

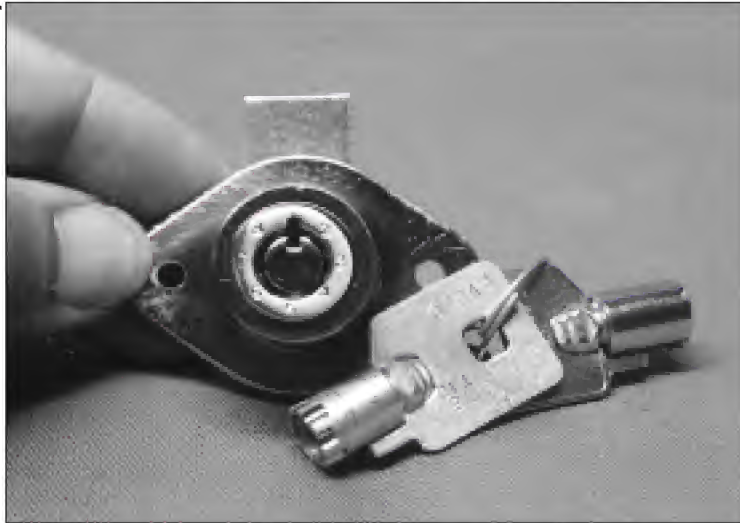


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Continued from page 78
(DHI page 18)

15. A tubular key style desk lock has the same installation holes and dimensions as the disc tumbler lock.



top of the tube which keeps the key from pulling out before it is returned to a proper key pull position. The change key, by contrast, has neither bit. It is incapable of locking or unlocking the drawer lock. It can only reset the pins within the lock.

To reset the lock to work with another operating key, the change key is rotated so the key moves from the 1:00 position to the 2:00 position (see Photograph 17). Once the change

key is removed, the #1 key will be locked out and the #2 key will work instead. When resetting the lock, the change key should always be inserted with the top of the key positioned toward the current setting and rotated to the setting to be used next. The KeyMatic lock can be used with eight different operating keys before it needs to be replaced.

The M 21 Medeco sidebar version of the drawer lock is shown in



16. An operating key at the left and a gold change key at the right.

Photograph 18. It is available in Medeco's original commercial keyway and also in Biaxial. If your customer is interested in the highest level of security and key control, they may want to consider this version of the drawer lock. Like



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17. The change key is rotated so the key moves from the 1:00 position to the 2:00 position.

the two earlier locks, it will fit into the same installation. The lock dimensions and mounting holes are the same. It is rekeyable, but you will need to have a Medeco tumbler kit to accomplish the task.

To remove the plug the access hole is toward the back end of the tube and is not accessible when the lock is mounted in a drawer. The lock must be removed from the drawer for disassembly. After the retainer pin is



18. The M21 Medeco sidebar version of the drawer lock.

depressed the plug will pull out (see Photograph 19). Be very careful as you pull it completely out of the lock shell. The retainer pin is spring loaded and can shoot across the room. Both the retainer pin and spring are very small. If you are not careful you may lose either the pin or spring (or both).

Photograph 20, shows three different versions of the spring loaded plunger locks from Kenstan. These are used primarily on sliding cabinet doors or showcases. The lock on the left is a disc tumbler design. the lock in the middle is the tubular

style KeyMatic, and the Medeco is to the right.

Like the drawer lock, to remove the plug there is a retainer pin access hole on the left side. Photograph 21, shows the plug coming out after the retainer pin was depressed.

All three versions of the plunger lock are available in both captive key and non-captive key. They are available with the round shaped plunger bolts and also with a "T" bolt style plunger. The "T" bolt can lock two sliding doors together so that they can't be spread apart to bypass the lock.

Kenstan also makes cam locks of various lengths with the different lock cylinder and keying setups. A surprisingly wide variety of specialty and cabinet locks are available from Kenstan. With customers of widely varying wants and needs, their product line gives a locksmith a lot of leeway to present security

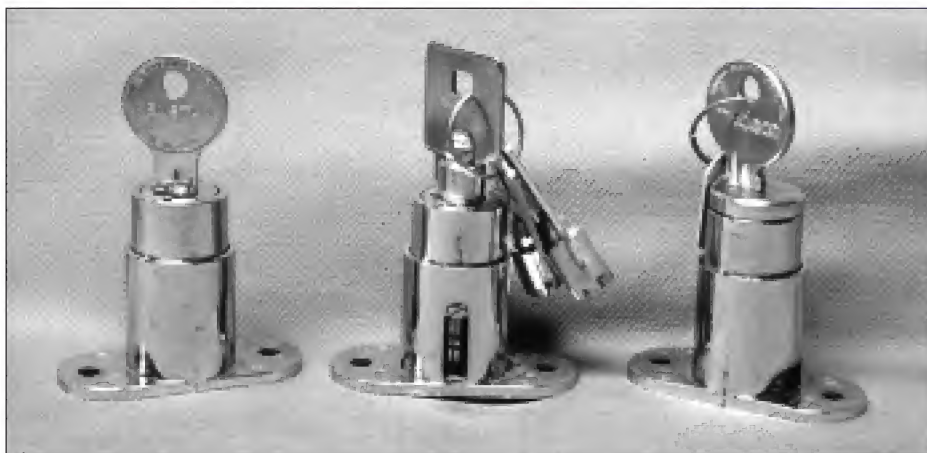


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19. After the retainer pin is depressed the plug will pull out.



20. Three different versions of the spring loaded plunger locks from Kenstan.

21. To remove the plug there is a retainer pin access hole on the left side.



products that should in some manner or form fit the bill. A customer can pick from price, convenience and security.

For additional information on a wide assortment of cam and cabinet lock products, contact:

All-Lock
P.O. Box 1349
Selma, AL 36701
(334) 874-9001

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Torrance, CA 90501
(800) 328-7030

CCL Security Products
199 Whiting St.
New Britain, CT 06051
(860) 229-6199

Fort Lock Corporation
3000 N. River Rd.
River Grove, IL 60171
(708) 456-1100

Illinois Lock
301 W. Hintz
Wheeling, IL 60090
(847) 537-1800

Kenstan Lock & Hardware
101 Commercial Street
Plainview, NY 118003
(516) 576-9090

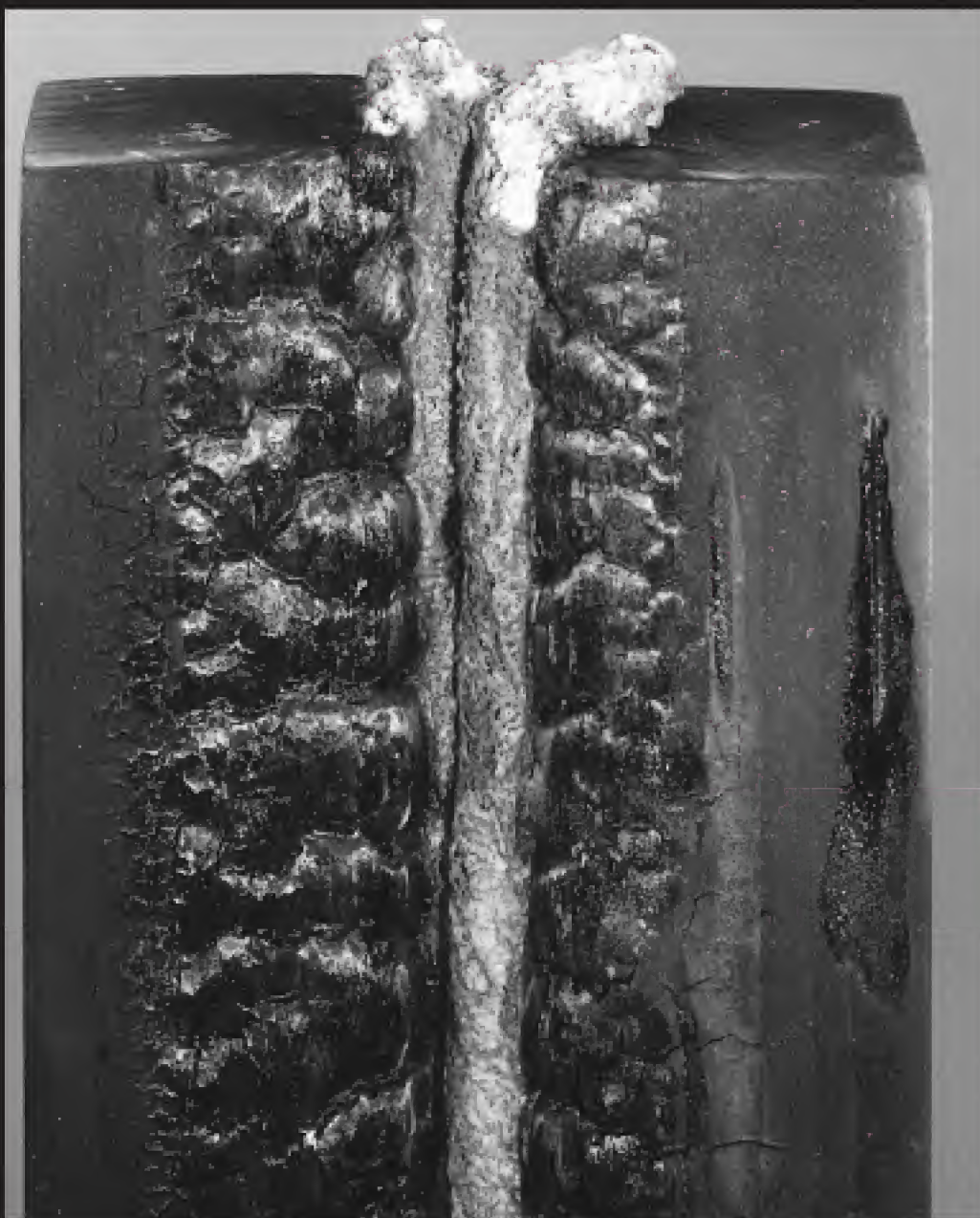
National Cabinet Lock
P.O. Box 200
Mauldin, SC 29662
(864) 297-6655

Olympus Lock
2720 NE 115th Street
Seattle, WA 98125
(206) 362-3290

Timberline Supply Ltd.
915 Sherwood Dr.
Lake Bluff, IL 60044
(708) 234-1864 **TRL**

ZERO'S

F i r e s e a l s



Formulated specifically for the special needs of door assemblies, Zero's INTUMET™ intumescent material optimizes the life safety performance of door gasketing. INTUMET™ gasketing systems block low-temperature ambient smoke as well as warm smoke and fire.

The International Congress of Building Officials (ICBO) voted to ratify code modifications introducing demanding new standards for fire-door testing including the addition of positive pressure furnace conditions. The modified UBC 7-2 standard has been implemented into the 1997 Uniform Building Code, which covers 35 states.

ICBO also ratified separate smoke door test procedures and smoke leakage limits as a further require-

Zero's fire and smoke seal meets the challenge as active role for door gasketing emerges from new code changes.

ment of UBC 7-2. Adapted and modified from NFPA 105, the new criteria require that smoke doors be tested under the most demanding conditions, at either ambient (75 degrees) or "warm" (400°F) smoke temperatures, as determined by representative test data. Where code officials previously had to rely on personal judgment regarding excessive smoke, the new standard now provides an objective, measurable test for smoke visibility.

With long-debated code changes for fire-door testing now a reality, the adoption of a positive pressure standard together with demanding smoke leakage limits has trans-

formed the once passive role of gasketing in fire and smoke control door assemblies. To achieve specified performance levels for withstanding positive pressure and minimizing smoke leakage, gasketing now has a specific function in protecting the door's clearances under dynamic conditions. And the performance of the gaskets has become critical to the rating of the assembly — as well as its ultimate life safety function.

Intumescent material enables gasketing to fulfill this mission efficiently and cost-effectively. When exposed to heat or fire, this material expands to fill the spaces and block penetration by flames, smoke and toxic gases. However, optimal performance requires the right kind of intumescence — and most materials available in the U.S. were not created for doors. Zero International has filled the gap using innovative SOFT PUFF™ intumescent technology that delivers the properties and performance best suited to meet the unique challenges of fire and smoke doors. Developed and manufactured in the U.S. by Zero, INTUMET™ intumescent

material is designed specifically for door assemblies.

To block smoke and fire effectively (and prevent flaming on the unexposed side of the door during fire testing), all clearances and gaps in these assemblies must be solidly sealed—and doors must remain latched. Zero's soft-puff solution is controlled expansion that will not force open the door. INTUMET™ seals expand evenly in all directions at a gradual rate that allows the material to fill even the smallest spaces. By contrast, conventional "hard-puff materials are formulated as fire-stopping for firewall penetrations, intumescent by design with sufficient force to crush burning PVC pipe and other melting penetrants, and usually expanding very fast.

Hard-puff materials can cause other problems for doors when this rapid expansion empties the intumescent "reservoir." Because doorways are often escape routes, and gaps must be resealed if the door is opened, INTUMET™ is designed to continue intumescent when the door is closed again. And, to minimize leakage of life-threatening

smoke and gases, protection is needed at the relatively low temperatures where rubber gasketing starts to fail. Although most firestopping products expand at much higher temperatures, INTUMET™ begins intumescent at approximately 250-300 degrees F — the range where most organic materials begin to emit combustible and noxious gases.

INTUMET™ material can be mortised directly into door edges and/or frames, or designed into gasketing systems for new or retrofit applications. It is used in Zero's FS-Series gaskets for both wood and metal doors, and is also available in strips of varying thickness and width as well as almost unlimited custom shapes.

Zero's intumescent material and gasketing systems have been tested with wood and metal doors, and with single doors and pairs, in accordance with U. S., British and other international specifications for both fire and smoke control door assemblies. Zero's testing includes the newly ratified UBC 7-2 modification for fire endurance, which establishes the neutral plane at 40" or less above the sill — and procedures for measuring ambient (75 F) and warm (400°F) smoke established by NFPA 105, which have been adapted for modified UBC 7-2.

With integral INTUMET™ material, Zero's FS-3 Fire and Smoke Control System is the first and only sealing system that changes the conditions of positive pressure fire tests and meets smoke leakage requirements — all in a single product. Its components block smoke penetration at temperatures below the activation point of the intumescent material; and the intumescent seals then maintain the integrity of the sealing system at higher temperatures. Smoke leakage through the FS-3 System under "warm smoke" test conditions is below detectable levels.

Fact sheets about Zero, the INTUMET™ story and technology, and product testing are available upon request. For fact sheets, Zero's catalog, or information, contact: Zero International; 415 Concord Avenue, Bronx, NY 10455-4898 USA; PHONE: 800-635-5335 or 718-585-3230; FAX: 800-851-0000 or 718-292-2243; E-Mail: Zero@Interport.net. **TNL**

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1. MasterKing's "List Format" is the most simple and most straight forward method for developing master key systems.



2. "Page Format" is used when a more complicated and flexible system is needed.

HPC's MasterKing™

*You Don't Have To Be A
Mathematical Genius To Develop
Superior Master Key Systems.*

Anyone who manually writes complex and accurate master key systems should consider themselves a mathematical genius, and they deserve a pat on the back. Putting together a multi-level system can be difficult, tedious and time consuming. Not to mention that there is so much room for error, and the liability tied to a poorly designed master key system is something I'd rather not have to face.

Thank goodness we live in the age of computers. Computers were designed to handle all of the mathematical, tedious, and repetitive processes that we face on a daily basis. And they're very good at it. So it seems very logical that you'd want your computer to help you put together something as complex and important as master key systems for you.

HPC's MasterKing™ Program is extremely easy to use and helps you kick out systems remarkably quick in three different ways.

MasterKing's "LIST FORMAT" is the most simple and most straight forward method for developing master key systems (see Photograph 1). In the List Format, system key bittings are arranged into 1, 2, 3, 4, or 5 levels. For example, in a four level system, a Great Grand Master Key (GGMK) will open every lock in the system. Under the GGMK are one or more Grand Master Keys (GMK) each of which will open all of the locks under it, but not under the other GMK's.

Under each GMK are one or more Master Keys (MK) each of which will open all of the locks under it, but not under any of the other MK's. Under each MK are one or more Change Keys (CK) each of which can open only the locks with corresponding pinning.

MasterKing's "PAGE FORMAT" is used when a more complicated and flexible system is needed (see Photograph 2). In the Page Format system, every chamber is progressed. The bitting of the chamber progressed first changes with every key. The bitting of the chamber progressed second changes with every block of keys. The bitting of the chamber progressed third changes with every column of blocks. The bitting of the chamber progressed fourth changes with every page of columns (thus the name Page Format). The bitting of the chamber progressed fifth is changed for the entire set of pages.

The Page Format also creates Row Masters that will open lines of locks through columns on any given page.

This is ideal when you need to give someone a master key to open one or more locks in many different areas that are under different masters, but you don't want them to have the ability to open every lock. Maintenance, Housekeeping, etc.

MasterKing's "MANUAL FORMAT" allows you to enter existing systems so that you can keep track of and edit them. In the Manual Format system you are allowed to edit every aspect of each key symbol including its label, bitting, master and comments. After a Manual system has been entered it can be displayed in the List Format for easier reading.

A couple of things that can ruin manually written master key systems are cross keying and key interchanges. This occurs when a cylinder is combined to two or more keys which would not normally be expected to operate that cylinder.

In a manually written master key system where your customer asks you to cross key one or more cylinders, it is almost inevitable that other keys in your system will open that cylinder as well. Without taking great care to eliminate all of those other keys, you will severely limit the security of that cylinder and your entire master key system.

When you create cross keys in LIST or PAGE format in HPC's MasterKing™, the program automatically alerts you to all of the other keys that you have affected so that you can eliminate them from your system. You won't have to worry about key interchange with MasterKing™. This program was designed so that you can't create accidental cross keys or incidental master keys.

Each MasterKing™ screen has been designed to make producing master key systems with MasterKing™ easy and intuitive. On each screen there are icons you can click to perform the most common tasks. On each screen there is a Menu Bar with drop down menus for all of the functions available for that screen. Shortcut Letters on both the Menu Bar and the Icons are underlined. If you ever get stuck, click the Help icon or click Help on the Menu Bar to access the Guided Tour and MasterKing's extensive, context sensitive Help feature.

MasterKing's main screen consists of a listing of your master key projects and a row of easy to understand icons that allows you to select an existing project, create a new project, view/edit project information, delete projects, enter custom hardware information, or go to your customer list.

Clicking on New Projects brings you to a screen where you can pick from one of over 50 different preset manufactures as well as any additional manufacturers that you have manually entered. Your chosen manufacturer's master keying

specifications pop-up and you are given the ability to edit the Mac's, progression steps, maximum number of chambers, and shortest/ longest pins to be used. From here you choose whether to use the PAGE or LIST format or to create a manual system.

If you choose the LIST format you are then asked to enter the number of levels you desire and the top master key (TMK) bitting. You are then prompted to choose which chambers to progress at each level and in what sequence to progress them. The theoretical number of possible



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bittings will be displayed. Clicking on the Compute Actual icon calculates the total actual bittings. Press Display Bittings and you have a master key system.

If you choose the PAGE format you are asked to enter your TMK bitting and your progression sequence. That's all. Press Display Bittings and you have a master key system.

In both formats MasterKing™ gives you all of the legitimate and possible master keys and change keys. It is now up to you to assign master keys and change keys and to

save the rest of the system for your customers future changes and or expansion.

MasterKing™ by HPC offers a number of additional features and can handle locks containing 4, 5, 6, or 7 chambers, including Corbin Russwin, Best, and Falcon type interchangeable core cylinders.

MasterKing™ has optional password security and the ability to print out key symbols and pin counts.

MasterKing™ supports rotating constants in two level List format systems and allows customized

progression sequences.


MasterKing™ gives you the ability to search by bitting, key symbol, and/or by the comments that you enter to describe each key (Maintenance, Washroom, 5th floor, etc.)

MasterKing™ can interface with HPC's KeyTrail and Codemax to make an all encompassing key producing/tracking package.

HPC's MasterKing™ program is designed so that you don't have to be a mathematical genius to create a master key system. This program can build great systems for an amateur master key system writer, as well as be the ideal tool for designing superior master key systems at the fingers of an expert.

HPC's MasterKing™ sells for a suggested dealer price of \$299.95.

MasterKing™ IC (for interchangeable core systems only) is also available for a suggested dealer price of \$175.00.

For more information on HPC Software, contact your Authorized HPC Distributor or HPC directly at 847-671-6280. 



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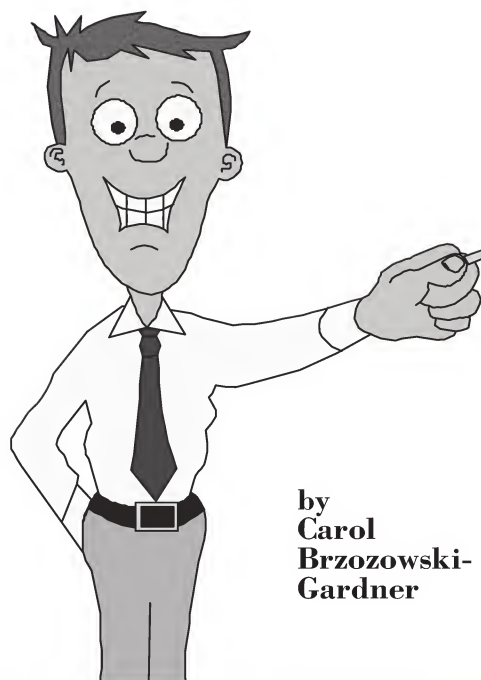
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by
**Carol
Brzozowski-
Gardner**

Small Business Strategies

You're a small business owner. Either you don't have a choice in the matter at this point or you intentionally want to stay small because you like to maintain control over your company's operations and direction. Maintaining a small business in the 1990s - a time when nationals and multinationals have taken businesses out of communities and into the global sphere - can present a challenge unthinkable to small business owners of past eras.

Don Taylor knows keenly the challenges of small businesses. He is the director of the Small Business Development Center for West Texas A & M University, a program which receives funds from the Small Business Administration. In that capacity, he has helped business owners and managers work their way back to prosperity from a more dim positioning.

Along with Jeanne Smalling Archer, he also is the co-author of the book "Up Against the Wal-Marts" (published by AMACOM, priced at \$21.95). Although the book's title speaks of retail, Taylor says the majority of it applies basic business principles to any business.

"It's not an anti-big business book," Taylor contends. "It's a pro-small business book."

Taylor advocates a few basic business principals small business owners should keep in mind. The following are some of his suggestions.

KNOW YOUR CUSTOMER

Get close to your customer. Knowing your customer is the most important key to survival as businesses enter the next century. Know who your customer is, what they want and what needs they have. Then provide the products and service in a way that gives you a sustained advantage, otherwise, you may need to compete merely on price, which places your company at a disadvantage against larger companies.

Two ways to make sure you're connecting with your customers is to train your employees in customer service and to get out in the field yourself and touch base with your top customers.

Your employees may have the most direct contact with your customers, and if they're sharp enough, they'll talk with the customer to ascertain his or her needs. Typically, though, this is not the way people view their jobs. The person who owns the company will most likely have to be the one who stays in contact with the customers. That person, however, may be so heavily involved with the company's day-to-day operations that he or she loses sight of the people responsible for the existence of that business - the customer.

If you don't stay in touch with your customer, you may lose that customer.

PERSONAL VISITS

Visit the top 10 customers. Instead of marketing new clients all of the time, visit your existing customers.

Look at what the competition does, and if they don't do something well, position your business to capitalize on that. Ask customers about their product and service-based needs. And when they give you a response, your answer should be: "We can do that."

As a small business person, you can do that, because you're not as tied into traditional company policies and procedures that are typical of larger businesses - you can afford to be more flexible to meet changes more quickly. If you're flexible in giving customers what they want, you've endeared yourself to that customer and have saved them time. That way, when the time comes to renew a contract and someone comes in with a lower-priced bid, if you offer your customers unique service based on their needs, they not only will be willing to pay more for your service, but they'll be happy to do it, because they perceive it as a good value.

SATISFY THE CUSTOMERS NEEDS

The advantage of having a small business is that a manager can counteract what Taylor calls big businesses' "feet of clay" when it comes to taking action. It's typically called "customer service," but Taylor eschews that term, saying it turns out more to be "lip service"; i.e., saying you provide friendly and accommodating service, but doing the opposite.

True customer service is making sure the customer's needs are met fully and that you're servicing them to the best of your ability.



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You have to provide a higher level of service than you did a year ago. And the only way to do that is to measure it. Restaurants have customer response cards that give them some indication of how satisfied the customer is. In your business, make it easier for your customer to give you information. That goes hand-in-hand with those personal, face-to-face visits you should make to your top clients - that way they'll feel free to contact you. If they complain to your receptionist, for example, that employee may not have as vested an interest in your client's needs as you do.

Take obvious actions, such as keeping promises. If your company promises to show up at 6 a.m. Monday, then be there at that time to get the job started.

VALUE ADDED SERVICE

Taylor likes the philosophy of "value-added service" and considers it a good strategy, saying it increases the customer's perception that they're getting a good deal.

He makes an analogy to a teeter-totter: there are two skinny kids on one end representing quality and quantity and a fat kid on the other end representing price. Together, he says, they should balance out.

If you provide value-added services, make sure every customer is aware of that. If all the customer sees on your promotional material or hears from your sales staff is price, but is unaware that you may provide special services free of charge, for example, they may decline to do business with you.

PROFIT LOSS MARGINS

According to Taylor, all growth is derived from sales, but too often the "bigger truck syndrome" happens. For example: two men who decide to get a pick-up truck and sell watermelons. They purchase the watermelons at 10 for \$1 and set themselves up under a shade tree to sell the watermelons for 10 cents each. They manage to sell the truck load, but obviously made no money.

It's not always true that the more sales you make, the more money you get, unless you were profitable at the start. To avoid the "bigger truck syndrome":

Know the true costs of doing business; the true cost of goods sold.

Know your fixed expenses (overhead).

Obtain a good gross margin for control of operating expenses.

Consider the return you get on the investment you have in the business and price your goods and services to cover it. It's simple math: you have to have enough profit to survive, to cover for your depreciating assets and hopefully to thrive.

SHARPEN YOUR MARKETING SKILLS.

In his book, Taylor talks about several elements of marketing, including what products you have, how you price your products, what position you have in the industry, how you promote yourself, your geographical location, and how well-trained and customer-oriented your employees are.

Is diversification a good marketing strategy?

According to Taylor, it has its pros and cons.


If you broaden what you do, you may be so busy doing other things that you're not doing any one thing well. Stay as close to your business core as you can. If what you're considering fits the mission of your business, then by all means do it. In other words, diversification has to be able to attract new customers without alienating the old ones.

Don't market the "availability" aspect of your business unless you're willing to trade a certain quality of life that comes with a 9-to-5 Monday through Friday job for being on call at all times to your client (with business growth, you can eventually hire others to do that for you). A client may be willing to pay an additional price for a service, for example, if it's performed before or after "normal" business hours to accommodate his or her business needs.

BE BETTER, NOT BIGGER

Here is yet another business quagmire: if a bigger business is moving into your territory, should you invest more money in yours to counteract the perceived consequences?

More important than to acquire more and invest more, is to ask yourself, "How can we more effectively serve our customers?" If you need to invest in your business, do something pre-emptive.

According to Taylor, everything goes back full circle to service - something the best of the small businesses do quite well. 

TECHNITIPS

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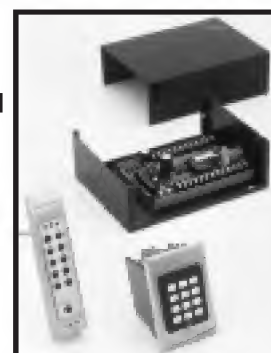
THIRD PRIZE:
\$500 IN ALL LOCK PRODUCTS



FOURTH PRIZE:
\$500 IN ASP AUTO LOCKS



FIFTH PRIZE:
SECURITRON
DK-26
TOUCHPAD
AND CPU
BOARD FOR
MAGNETIC
LOCK



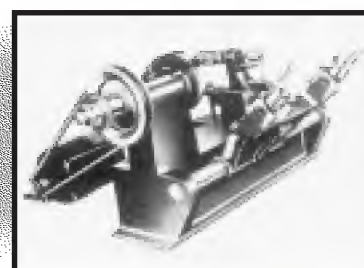
SIXTH PRIZE:
SDC
MAGNETIC
LOCK,
KEYPAD
AND EXIT
SWITCH



SEVENTH PRIZE:
ARROW EXIT DEVICE AND
MOUNTING PLATE KIT



EIGHTH PRIZE:
FOLEY-BELSAW
200 KEY MACHINE



NINTH PRIZE:
SLIDE LOCK'S GRAND
MASTER "Z" TOOL SET



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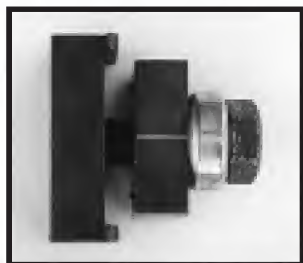
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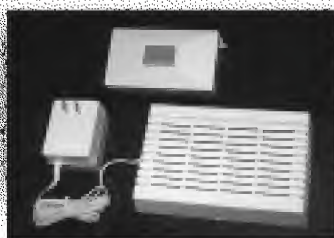
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FOURTEENTH PRIZE: SIEVEKING PRODUCTS SQUEEZE PLAY



FIFTEENTH PRIZE: RODAN'S AV TX200, RX200, INDOOR WIRELESS TRANSMITTER AND RECEIVER



SIXTEENTH PRIZE: ABUS PADLOCK'S MARINE PADLOCK DISPLAY



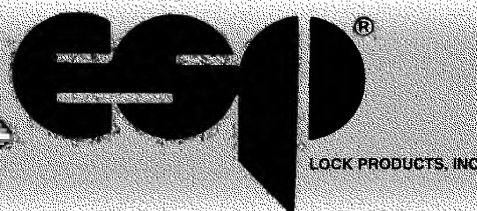
SEVENTEENTH PRIZE: BAXTER J V-1 and J V-5 CODE BOOKS



EIGHTEENTH PRIZE: FRAMON IMPRESSIONING HANDLE



NINETEENTH PRIZE: ESP PRODUCTS SAMPLER FROM ESP



Send in your tips, and win! How To Enter

Simply send in your tip about how to do any aspect of locksmithing. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,
The National Locksmith, 1533
Burgundy Parkway, Streamwood, IL
60107 or send your tips via E-mail to:
Natlock@aol.com

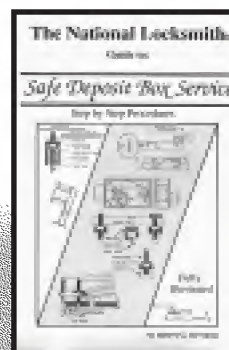
Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

By entering, your chances are greater than ever that you will win one of the prizes listed. This is the biggest Technitips prize year ever. Wouldn't you like to be a prize-winner in 1997? If so, enter today!

*Tips
start
on next
page!*

TWENTIETH PRIZE: SIEVEKING SAFE DEPOSIT BOOK





**ALL LOCK KWIKIT
WINNER:
A Convertible Dolly**

I came up with this idea for a portable work station after rekeying a three story apartment complex. It's simple, quick and fairly inexpensive to make. The materials used was an old two wheel dolly, a 3/4" thick piece of plywood, some 1" bolts and two medium duty hinges.



Photograph 1.

I have a work surface that will, if necessary, support a key machine pinning kit, vise and any other hardware I might choose to place on it (see Photograph 1).



Photograph 2.

When the support leg is not in use, I secure it to the side rail of the dolly with two spring clips. When ready for storage in the van, the table folds down and out of the way (see Photograph 2). As you can also see in the photograph, the tongue of the dolly is great for attaching a tool box so you can have all the tools you need handy.

Mark Hinkle
Illinois

A Few Words From Jake...

SHAAAA -ZAAM !!!

Earlier in the year, I issued a challenge to all by saying "I dare each one of you to send me a tip and win some really neat stuff in our most bodacious, Technitip year ever!" Well, not everyone sent me a tip, but enough of you did that you made this ol' boy's trips to the mailbox mighty interesting! And ... the e-mail was really zapping in as well.

Curious thing though; most of the folks that did the e-mail thing, did not think to add their physical address. Often, they didn't even give their full name, and frequently, they only used their e-mail handle, you know, like: SPINNER and SKYKEY. Sadly, without a physical address, I can't use your tips, even if it was a good one! Oh well, like someone once said, "Stuff happens!"

At any rate, we're getting mighty close to the end of the year and the Technitips year-end prize drawing. If you want to have a crack at one of the twenty-one fantastic year-end prizes, you best hurry and get me a tip. Even if you don't get one of the biggies at the end of the year, if I print your tip, you'll get some absolutely neat stuff.

In closing, I'd like to mention that a number of you have written me personal notes— along with your tips - telling me how much you appreciate the Technitip column and how it helps you in your day-to-day job. I just want you all to know (this includes a few critics as well), that I appreciate your comments, accolades, criticisms and suggestions. Sorry I can't take the time to acknowledge each one individually, but collectively, I say to you all, "Thanks for helping me make this column one of the most popular in the magazine!"

Y'all heah me, now?



by **Jake
Jakubowski**



**AERO LOCK TRY-OUT
KEY SET WINNER:
An Economical
V.A.T.S. Key Adapter**

Here's a tip that transforms a typical GM keyblank into an economical V.A.T.S. key adapter.

Take a standard B62NP key blank and a 4" piece of .22 gauge (.0031) insulated, solid copper wire. Cut the wire into two, 2" pieces and Super Glue them to the center of the key blank — one on each side - and let the glue set (see Illustration A).

Next, use a sharp pocket knife or X-ACTO knife and shave off 1/2" of the insulation at the point where the resistor pellet makes contact with the ignition cylinder contacts.

Make sure that the wire at this point is fully exposed, but does not come into contact with the key blank. Use a volt/ohm meter to make sure there are no signs of electrical contact between the wires and the key blank.

At the other end of the wires, strip

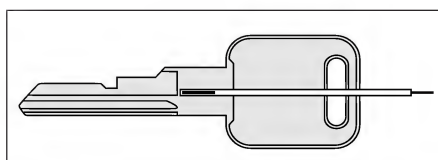


Illustration A.

back 1/4" of the insulation on both lead wires. The key is now ready for use. You can also use this tip to make an economical double sided V.A.T.S. key.

Mark Jekel
Colorado



**STRATTEC RACING
JACKET WINNER:
The Snorkel
Protector**

I like to carry a small 2 oz. can of WD-40 on my tool belt. Unfortunately, I was plagued with accidental discharges as well as broken or lost snorkels and nozzles. Here's how I devised a satisfying solution to these problems.

I cut 1.25" from the bottom of an empty (make sure it is very, very empty or the container can explode in your face!) 2 oz. WD-40 can. Next, I cut a 1" hole out of the bottom and another hole in the side for the snorkel (see Illustration B). Then smooth all the edges.

Attach the "Snorkel Protector" to a full can of WD-40 using duct tape. Cut the snorkel about an inch long and insert it in the nozzle, through the hole in the protector. I also use a small rubber grommet from the hardware store to prevent the snorkel from being sheared off in rough usage.

I have probably used this same snorkel protector on about thirty new

cans of WD-40 without any unpleasant surprises.

Michael Zurawski
Wisconsin

[Editor's Note: Michael mentions cutting into a "very empty" can. If you try this tip, make sure that you follow Michael's advice

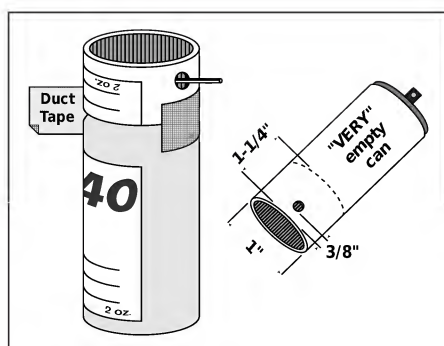


Illustration B.

since you will be cutting on an aerosol can that is a pressurized container. When trying to cut any type of pressurized container, you need to approach the job with extreme caution.]



HPC PISTOL PICK WINNER: Titan Cylinder Removal

If a customer has lost their keys to a Titan entry knob set, first open the lock by picking it. Next remove the knob from the door and remove the black plastic busing and metal shroud from the back of the knob.

Remove the spindle rod as you would on a standard Kwikset. Now, take a harpoon shaped key extractor, and with the barb pointed down, bend it slightly to the left (see Illustration C).

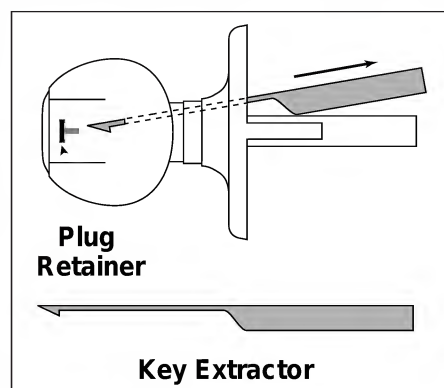


Illustration C.

With the back of the lock facing you and the keyway in the upright position, slip the key extractor barb down in the upper left corner — along side the cylinder plug. Angle the extractor about 15 degrees and reach for the wire spring that holds the retaining tab and pull it out.

The spring, tab and cylinder plug should rattle out into your hand.

At this point, you can decode the cylinder, transfer the cuts onto a working key or a modified key blank for removing other cylinders.

Bob Dillard
Texas



SARGENT AND GREENLEAF WINNER: Laminated S&G Instruction Sheets

I have taken all the combination instruction sheets for S&G 6700, T8410, T8415, 8550-M P, and 8077's, and have reduced them on a photocopier to what I consider a workable size. I try to get all the lock information on one double sided menu sized card which I laminate between plastic sheets. This way I don't have to shuffle through a Zip-Lock bag full of various instruction sheets looking for the one I want.

Since mine are laminated, the instructions don't get all dog-eared, beaten up and torn. Plus, no one writes combinations on the sheets when they are being used to change a combo.

In the left-hand corner of each sheet, I punch a hole that allows me to insert a single chrome key ring. This way, I can keep the sheets in chronological/ model number order and insert other S&G product information.

SRI

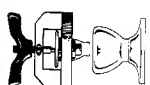
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Carrying the foregoing one step farther, I have attached to the key ring a two-way fishing swivel (a #1 or #2 will work well) and a small diameter piece of surgical tubing about 1-1/2" long. In one end of this tubing I have inserted the proper change key. The other end of the tubing is forced up and over the swivel to about the mid point. This keeps the instructions and the proper change key available to me right where and when I need them.

John R. Starrett
Canada



**A-1 SECURITY
PRODUCTS WINNER:
Adjustable Plug
Follower**

If you ever get caught short without a follower (for whatever reason) here's a quick solution that will get you out of a jamb in a hurry.

Grab an old aluminum soda can and cut out a piece about 2-3/4" x 3-1/8". File or sand down the sharp edges and roll it up into a tight tube as shown in Illustration D.



Illustration 4.

By tightening the roll, or loosening it, you have an adjustable follower that will fit a variety of cylinders from a peanut cylinder all the way up to the old large-style Corbin-Russwin. Also, you can accommodate various cylinders that have tapered or "stepped" ends on them that can be difficult to work with even with a standard follower.

This is also a good tool to have when you encounter a plug that has the tail piece attached with a roll pin and you don't want to take the roll pin out.

Carlos Lorenzo
Texas

[Editor's Note: Carlos sent me a sample of his "emergency" follower and I played with it a little. It does work well enough that keeping a "sheet" in your tool box might not be a bad idea. The only drawback that I found is that the aluminum can cut your fingers if you are not careful handling it.]



**SILCA KEY BLANKS
(100) WINNER:
Rekeying Schlage
Hotel Locks**

When rekeying Schlage key in knob hotel function locks ("A" or "D" 85PD Series), I have developed a tool for holding the occupancy indicator in the plug while dumping the pins.

I use my HPC 1200 to mill the entire length of the appropriate key blank to a depth just below a "9." This allows me to rekey the plug without having to worry about an escaping occupancy indicator pin. And, by milling the entire length of the key blade, the pins won't jump out as you withdraw the specially prepared blank.

I've also found this blank works great in Schlage Primus to hold the foot pins in place.

Phil Payne
Mississippi



**PRO LOCK PK15
PROFESSIONAL PICK
SET WINNER:
Bent Wafer Lock
Removal**

If you have to service an ignition with a bent or jammed wafer, don't immediately grab your drill, especially if you don't have a replacement ignition. Many of these ignitions can be accessed by drilling out the roll pins, however, many must be turned to the accessory or "on" position before you can depress the retainer to remove the ignition. If you have one that needs to be turned to access the retainer, try this trick before you decide to drill.

Generally, it is only one wafer that is bent or jammed. Use the customer's key to make a duplicate, cut the bow of the key off approximately 1/8" back from the shoulder of the key as shown in Illustration E. Insert the duplicate key all the way into the ignition — even if you have to "persuade" it to go in. There should be as much as 1/2" between the end of the key and the face plate or bezel of the ignition.

Now, grab a large flat tipped screwdriver with a square shaft and an adjustable wrench. Insert the screwdriver in the ignition and use the adjustable wrench to turn it. Since the wafers are usually brass, the jammed one will usually bend or break, allowing

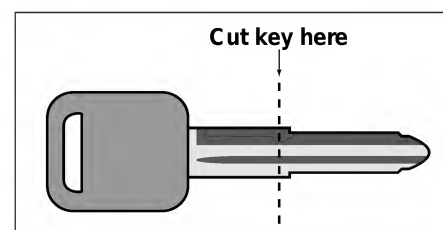


Illustration E.

the ignition to turn so it can be removed and repaired.

Mick Lindemann, CRL
Minnesota



**TECH TRAIN TRAINING
VIDEO WINNER:
Eliminating Mounting
Tab Twisting**

After installing an Adams-Rite dead latch and paddle, a customer reported that the paddle was not working. I found that the lock had shifted in the door so that the cam plug was not being engaged. Apparently, the problem was being caused by employees using their key to pull the door open, by doing so they had twisted the mounting tabs in the process.

I installed new mounting tabs and decided to install a set-screw on the outside of the door to prevent this from occurring again.

After making sure the lock was centered in the stile, I drilled and tapped the face of the door next to the cylinder hole for a 10-24 screw. I cut the screw to length and countersunk the screw hole so the screw would be flush.

I reinstalled the cylinder over a wide cylinder spacer ring, which both concealed the set-screw and will prevent it from backing out. Now, if anyone should use their key to pull open the door, the lock will remain stationary.

Richard A. Connell
North Carolina



**SIEVEKING PRODUCTS
GM E-Z WHEEL PULLER
WINNER:
A Soldering Gun
Magnetizer**

In the June, 1997 issue of The National Locksmith, I noticed a tip about using a magnetizer/demagnetizer for your screwdriver blades. Here's a trick I've been using for years to magnetize or demagnetize my screwdrivers.

With an electric soldering gun that has a trigger and a "loop" at the tip of the gun, similar to the one shown in Illustration F, just plug it in and magnetize your screwdriver by holding it about twelve inches from the "loop" and pushing it through the loop. Turn off the gun before withdrawing the

Continued on page 104

Continued from page 102

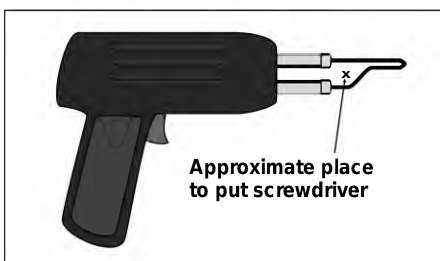


Illustration F.

screwdriver blade. Repeat process for a greater degree of magnetization.

To demagnetize the blade, insert the screwdriver in the loop, turn the gun on and withdraw the screwdriver from the loop until it is about twelve inches away from the soldering gun. If necessary repeat the process to attain complete demagnetization of the screwdriver.

Always turn the gun off before repeating either the magnetization or demagnetization of the screwdriver.

Don S. Hardy, RL
California

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PRODUCTS WINNER:
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Illustration G.

Because printed key fobs can be expensive and they all seem to look alike, I had the idea of having my regular business cards printed on plastic (see Illustration G). They're about the same size and thickness of the wallet calendars banks give away, so they fit well in someone's wallet, purse or pocket.

The print shop put a little target in the upper left hand corner for me and I punch a hole there and place it on a give-away key ring. I attached that combination to the customer's new keys.

These cards cost me less than 12 cents each in lots of a thousand, including the give away ring. That's a lot less expensive than the printed key fobs.

Don Mohan
New York



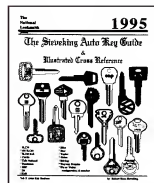
SLIDE LOCK'S "Z" TOOL
OPENING SET WINNER:
**Decoding A Lumina
Glove Box**

I just opened my first 1997 Lumina and found that it's an easy one. The glove box lock comes off simply by removing two screws, and although this lock is different from any I have seen, the cylinder retainer is exposed when the cylinder is turned clockwise 90 degrees to the locked position. However, don't even bother to remove the plug from the cylinder.

Insert an uncut blank into the keyway and look at the tumblers from the rear of the plug. The tumbler depths are stamped on the wafers and as you pull out the keyblank, you can read the depths.

Since these depths are the last four cuts of the key, code cut those four depths and progress the first two cuts to open the trunk.

Mike Spencer
Canada



THE SIEVEKING AUTO
KEY GUIDE WINNER:
Reminder Stickers

The sticker that you see in Illustration H, is one that I fill out and place in the glove box of every car that I generate keys for. I explain to the customer that should they lose their keys again, any locksmith

YOUR KEY CODES

IGNITION _____
DOORS _____
TRUNK _____

KEENAN'S LOCK & KEY
(800) 878-4694

Illustration H.

with code cutting equipment can make them a new set of keys without seeing the car. Of course, each sticker has my shop name and telephone number prominently displayed.

I have received numerous calls for more keys from these same customers as a result of this idea.

David, A Keenan, CRL
Vermont



JAKE'S GRAB BAG
PRIZES WINNERS:
Glue Stick Followers

Buy some clear glue sticks at the hobby/ craft store the next time you're there. They make excellent followers for the import cylinders where the plug diameter is too small to except a standard follower.

And by using the clear glue sticks, they tend to illuminate the inside of the cylinder.

George Henderson
South Carolina

Retaining Plate Code Placement

The next time you generate keys for a car that necessitated a column tear down and before installing the horn pad, etch or scratch the key code into the retaining plate so the next locksmith (maybe you again) won't have to take the column all the way down.

I don't believe some thief is going to tear down a steering column looking for a key code.

Ed Steedle
New York

Stripped Screw Hole Repair

Stripped screw holes in wooden frames, door jambs or door edges can easily be corrected with some Elmers Carpenter's glue and hardwood toothpicks (the round kind).

Just dip the tip of the tooth pick in the glue and insert in the stripped hole. Use as many tooth picks as necessary to fill the hole. Cut them off flush and proceed with the job as normal. It is not necessary to wait for the glue to dry.

The hardened tooth picks will hold the latch or strike screw more solidly than the wood around it. And the wet glue makes a good thread lock for the screw.

Martin Berman
Florida

The **LOX-SMITH** Side

'Just Horsing Around'



by
**Sara
Probasco**

“What do you think about packing us a lunch and going with me up to Glen Loch Farms, today?” Don asked at breakfast one morning last April.

“Up in the Hill Country?”

Don nodded as he reached for his coffee mug.

“Why are you going up there?” I asked.

“I thought we could do a little horsing around,” he quipped. “Actually, they’ve had some turnover in management and need locks changed on the main buildings and employees’ residences. If I’m going to do it all in one day, I could use your help,” Don said. Then he smiled. “Besides,” he added, “I know how you love the wild flowers. They were just beginning to bloom, when I was up there last week checking things out. Everything should be really colorful by now.”

The day was beautiful, sunny and warm with a moderate wind blowing out of the northwest. Although the previous evening’s news had forecast a possibility of thunderstorms and flash flooding for the Hill Country, no

dark clouds were in sight as we headed north and into the hills.

Due to an unseasonably wet Spring, everything looked green and fresh. Amid scrub cedar, gray cenizo was covered with the tiny purple-pink blossoms that give it the nickname “purple sage,” and mountain laurel wafted sweet fragrance from grape-like clusters of flowers. Even the prickly pear cacti were putting on a show for us with their bright yellow blossoms.

We had traveled about twenty miles when I saw the first of the wild flowers. On both sides of the road, pastures had become solid carpets of purple, red, and yellow flowers as far as we could see. Here and there cattle or goats were quietly grazing, seemingly oblivious to the beauty around them. On and on the flowers went, covering one field after another as if some heavenly artist had spilled his paints and covered everything with swirls of color.

Little did I know that nature’s beauty was only one of the treats in store for me that day. Don had told me a bit about Glen Loch Farms, but words could not adequately describe

what I was about to see.

“Their property begins here,” Don said, indicating a high, white, concrete wall. All along the top edge of the wall was a scalloped design, and every sixteen feet or so there was a large decorative concrete column topped with a Moorish finial. Imbedded all along the top surface of the wall were myriad colored glass bottles broken in jagged spikes to discourage anyone from climbing over. The wall continued for miles along the east side of the highway.

As we approached the turn-off to the main entrance, Don pointed to a high bluff across the highway to the west.

“That’s the ‘lookout’ house,” he said. “The owner’s son lives there, where he can keep an eye on the whole place. Two other residences are on down the road a few miles. We’ll be re-keying them later. More elaborate ones are inside the wall.”

I gazed in awe at the son’s enormous white house with its reddish Spanish tile roof. Halfway to the sky, it sprawled along the edge of the high bluff. It was surrounded by a concrete wall like the one we had been following.

Turning into the main drive, we were forced to pause at a massive solid gate. As it slowly swung open to admit us, we eased forward on a paved street that was beautifully landscaped with plants native to the area: low cedar, tall yucca with cascades of white bell flowers, purple sage, and others I could not name. Reaching an intersection, a group of tooled-wood signs gave us directional choices.

Following the road toward the main offices, we had driven for nearly a mile when we crossed a spillway bridge over a partially dammed river, where graceful long-necked swans and fat black geese swam placidly together. A little farther, and we came to a group of office buildings, where we parked and went inside.

Continued on page 109

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Continued from page 107

All of the Glen Loch buildings, including the residences, followed a similar architectural theme of terra cotta stucco exteriors with archways and red Spanish tile roofs. However, a distinct Arabian influence brought the otherwise Spanish arches to Moorish points at their apexes and adorned many of the buildings' entry areas with decorative ceramic tile wall-designs in shades of blue and yellow.

Each door was supported by three solid brass hinge brackets that crossed the entire face of the door. These added support, as well as beauty, to the two-inch-thick, solid wood, hand-carved doors. Baldwin was their choice of locks throughout the complex, but they were set in imported custom-made housings and trims.

Glen Loch Farms was built in 1970 by the Marshall family, who were heavily invested in the oil industry. Rumors report that at the height of oil production, the lease income from a single oil field, among many held by that family, was in excess of one million dollars per day. During that time, the family purchased well over a thousand acres of prime Texas Hill Country land, constructed the extensive farm buildings that became Glen Loch Farms, and stocked it with prize Arabian horses. Breeding and showing these magnificent animals then became their business — one that would weather the later oil bust and continue to keep them on top, financially, for many years to come.

In 1992, after the elder Mr. Marshall died, the remaining family decided to sell the horses. The auction of their Arabians brought bidders, literally, from the four corners of the world and yielded top prices for every horse. The farm itself was retained, but the family turned its interests to raising unusual breeds of cattle and exotic animals.

However, the entire complex remains a tribute to the magnificent Arabian horses originally housed there. The various buildings still bear bronze plaques naming them for this prize-winning horse or that. Although the stables, runs, and enclosed work-out areas remain empty at this time, they are impressive as ever, with their Spanish/Arabian architecture, constant-temperature air conditioning, and individually monitored TV cameras in every stall, originally designed to keep a constant watchful

eye on each prize animal.

The trophy room remains the most spectacular of the buildings to which we had access. Measuring approximately twenty by twenty feet with twelve foot ceiling, three walls are lined with deep, lighted, glass-front cabinets, floor to ceiling (except for doorways). In these are displayed hundreds of loving cups, silver and gold plates and plaques, ribbons, and photographs of the many and various prize-winning horses. Every year, from the origination of Glen Loch Farms until the horses were sold, is represented by multiple awards.

The forth wall is of plate glass. Before it, had been built a raised area four steps above the rest of the room, fitted with custom-designed sofas and chairs which faced the glass. It was designed to give those seated there prime viewing of the fully enclosed show arena beyond the glass.

Absolutely everything in the room pertains either to Arabia or to horses, from horse-head finials on the chairs to horse-shaped ashtrays and lamps on the tables. The chandeliers, the door knobs, the carpet all are either equestrian or Arabian in design, beautifully coordinated and combined with taste and elegance.

As we drove back to Uvalde late that afternoon, Don and I were discussing all we had done and seen that day.

"You know, there's just one thing that bothers me," Don said. "As much as I think of Sesame padlocks, I hated to see them on those particular storage buildings."

"Why is that?" I asked.

"Well, as much as the Marshall's were into that Arabian stuff, the manager who left probably was, too. And you know the old Arabian Nights tales," he replied.

I frowned in puzzlement.

"You lost me," I admitted.

"If he really wanted to, he could probably get in with just a couple of words."

"What do you mean? What kind of words would open a combination lock?"

Don grinned. I had "bitten" again.

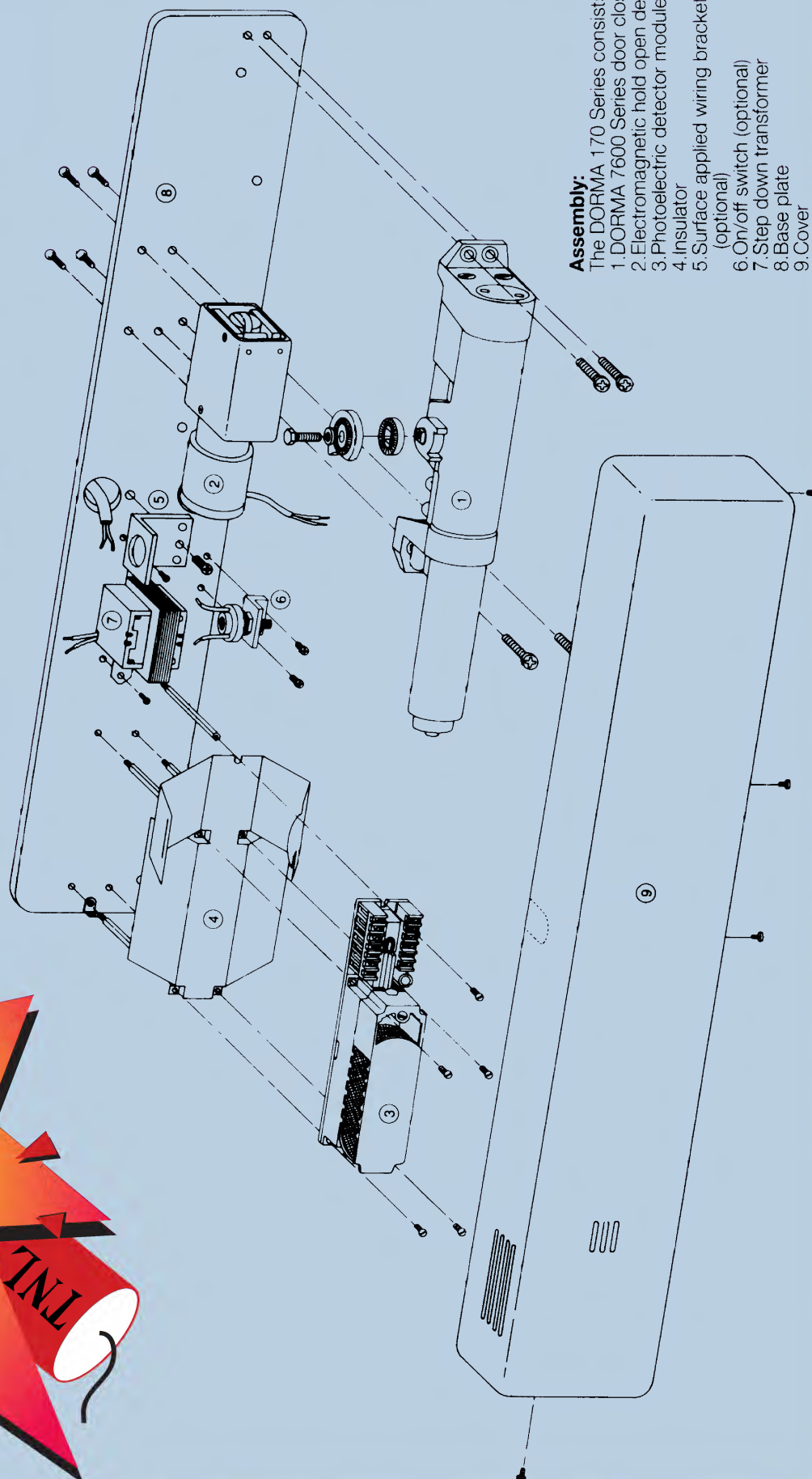
"Open Sesame!" he announced triumphantly. **RL**

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Dorma 170 Series Holder/Release Device with Integral Door Closer and Smoke Detector



- Assembly:**
The DORMA 170 Series consists of:
1. DORMA 7600 Series door closer
2. Electromagnetic hold open device
3. Photoelectric detector module
4. Insulator
5. Surface applied wiring bracket (optional)
6. On/off switch (optional)
7. Step down transformer
8. Base plate
9. Cover

**EXPLODED
VIEW**

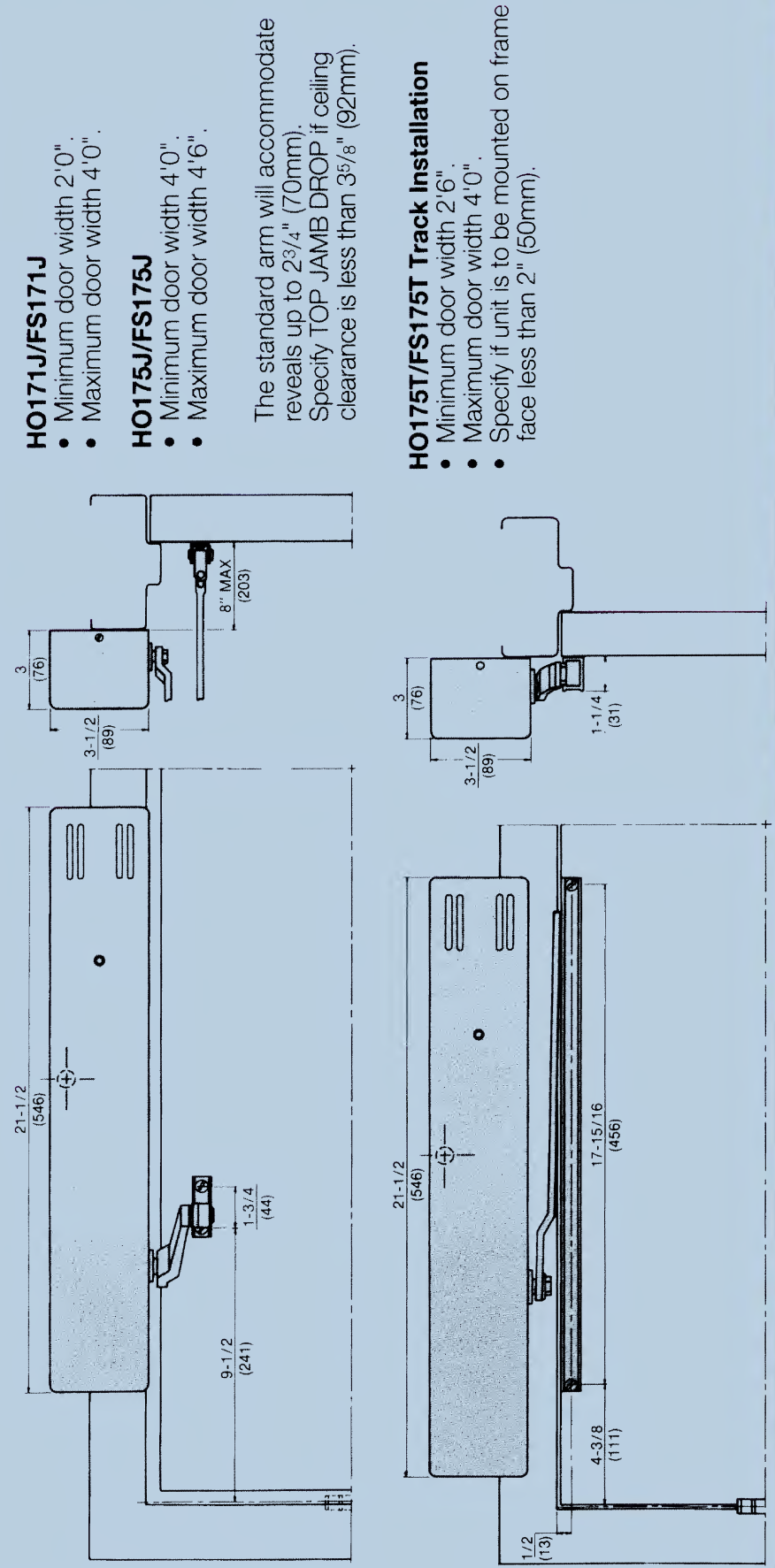
DORMA

Dorma 170 Series
Holder/Release Device with
Integral Door Closer and
Smoke Detector

Comparison Chart 170 Series

FUNCTION	DORMA	CORBIN	RUSSWIN	LCN	NORTON	YALE	RIXSON	SARGENT
Pull Side Mount Track	170T	N/A	N/A	N/A	7210 MPDS	4210 MPDS	11 Pull 3 11 Pull 4	N/A
Push Side Mount	170J	N/A	N/A	N/A	7220 MPDS 7230 MPDS	4220 MPDS 4230 MPDS	11 Push 3 11 Push 4	N/A
Pull Side Mount Track Auxiliary	170T Aux.	N/A	N/A	N/A	7210 MPSS 7210 MPTS	4210 MPSS 4210 MPDS	10 Pull 3 10 Pull 4	N/A
Push Side Mount	170J Aux.	N/A	N/A	N/A	7220 MPSS 7230 MPTS	4220 MPSS 4230 MPTS	10 Push 3 10 Push 4	N/A

Note: Some manufacturers furnish over-the-spindle covers as standard. Since no products are exactly alike, the data on this chart represents our judgement of which products are most similar. Information has been obtained from trade sources. It is not guaranteed nor represented that any specific product exactly equals any other product.



HO171J/FS171J

- Minimum door width 2'0"
- Maximum door width 4'0"

HO175J/FS175J

- Minimum door width 4'0"
- Maximum door width 4'6"

The standard arm will accommodate reveals up to 2 3/4" (70mm). Specify TOP JAMB DROP if ceiling clearance is less than 3 5/8" (92mm).

HO175T/FS175T Track Installation

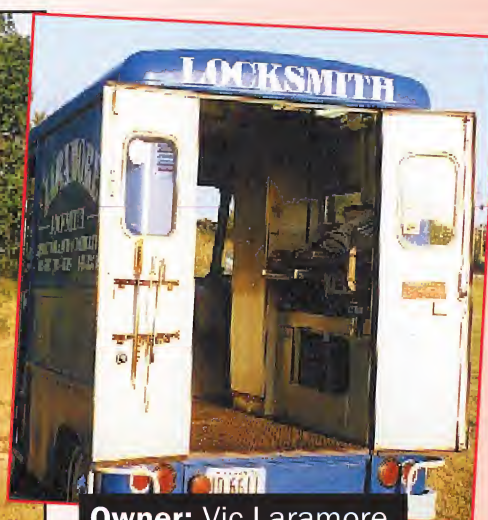
- Minimum door width 2'6"
- Maximum door width 4'0"
- Specify if unit is to be mounted on frame face less than 2" (50mm).

Road Rally

A showcase of locksmith service vehicles.

If you think your vehicle has what it takes to be featured here, send photographs and descriptions to:
The National Locksmith, Road Rally, 1533 Burgundy Parkway, Streamwood, Illinois 60107.

This month we introduce yet another new feature in *The National Locksmith* titled, "Road Rally". Each month we will showcase locksmith service vehicles. Much work, thought and pride has gone into every vehicle showcased. If you think your service vehicle has what it takes to be featured in the pages of *The National Locksmith*, send photographs and descriptions to: **The National Locksmith, Road Rally, 1533 Burgundy Parkway, Streamwood, Illinois 60107.** All entries that make it into the pages of the magazine will receive a copy of "The Ultimate Technitips Collection" a 300 page book of great tricks of the trade. So, break out that camera and send us your photographs today.



Owner: Vic Laramore,
Pampas, TX

Model: 1963 Inter-
national Metro Mite



Owner: William Miller,
Reynoldsburg, OH

Model: 1946
Chevrolet Van



Road Rally



Owner: Jeffrey Clinton, CRL,
Old Saybrook, CT
Model: 1996 GMC 3500



Owner: Andy Wilson,
Palmdale, CA
Model: Converted
Ford Ambulance





KEY CODES

Corbin
AUE 1-700

Key Blanks:
Original - 8658-J VR
Ilco - R1000V
Curtis - CO27
Silca - CB50

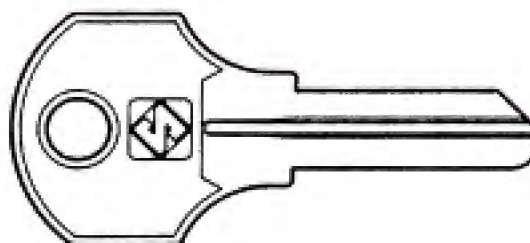
HPC 1200CM
Code Card: C11
HPC Cutter: CW1011

Framon:
Cuts Start at: .156
Spacing: .094
Block #: 3

Cut to Cut Spacing: .094

Number of Cuts: 6

Gauged: Bowto Tip



CB50

Spacing:

- 1. - .156
- 2. - .250
- 3. - .344
- 4. - .438
- 5. - .532
- 6. - .626

Depths:

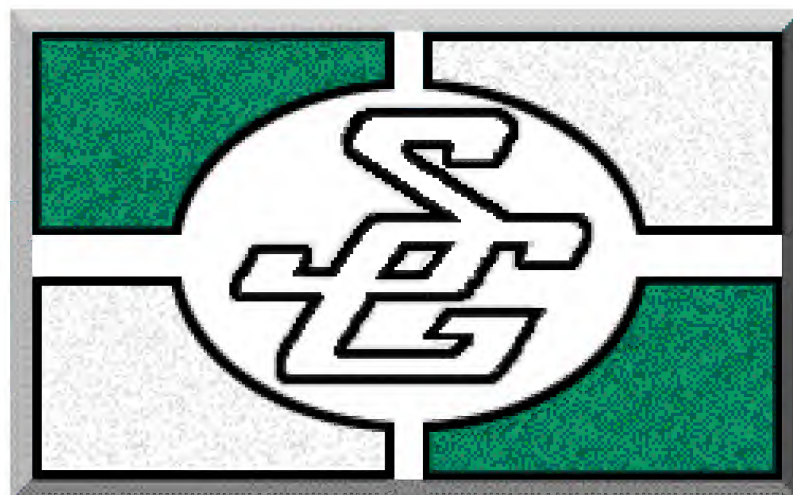
- 1. = .250
- 2. = .235
- 3. = .220

00 513511	35 535351	70 311151	105 331151	140 515351	175 335531
1 355531	36 155551	71 533331	106 155111	141 313351	176 311131
2 355351	37 551111	72 515331	107 513331	142 313531	177 133151
3 553131	38 333511	73 533351	108 151551	143 333111	178 553351
4 335311	39 155351	74 353111	109 111531	144 351551	179 115331
5 531151	40 131551	75 115131	110 555511	145 153151	180 135551
6 353351	41 555331	76 511351	111 115511	146 551131	181 351311
7 553151	42 551331	77 351131	112 513111	147 311351	182 135351
8 311531	43 151531	78 355331	113 311331	148 135331	183 111351
9 153511	44 355511	79 153111	114 131511	149 553531	184 311511
10 131151	45 531311	80 535551	115 135111	150 133311	185 151311
11 331511	46 553111	81 135131	116 313311	151 151151	186 511131
12 555551	47 115311	82 531551	117 155511	152 155531	187 131351
13 515151	48 531351	83 331351	118 315151	153 331531	188 351531
14 533311	49 133111	84 135151	119 553331	154 511551	189 151511
15 135111	50 551150	85 315351	120 335131	155 535151	190 533551
16 113311	51 531511	86 155331	121 335531	156 515531	191 153331
17 535311	52 533111	87 531131	122 313551	157 155151	192 515131
18 353131	53 351111	88 113151	123 351151	158 133131	193 533531
19 555151	54 353511	89 555111	124 335351	159 151331	194 155311
20 315311	55 353531	90 153311	125 331131	160 335511	195 515111
21 551531	56 335331	91 511331	126 515511	161 331311	196 535531
22 533131	57 131311	92 333331	127 351331	162 533511	197 553511
23 513511	58 535111	93 353551	128 113131	163 355131	198 513351
24 335111	59 355311	94 333151	129 535331	164 111331	199 555131
25 135511	60 333551	95 331331	130 331551	165 113551	200 551511
26 511511	61 531331	96 555351	131 113531	166 353151	201 335551
27 131131	62 151131	97 311551	132 311311	167 333131	202 515311
28 551351	63 351511	98 153531	133 155131	168 551551	203 111551
29 531531	64 153351	99 153131	134 135531	169 315531	204 551311
30 513311	65 353331	100 333311	135 513131	170 133551	205 555531
31 355551	66 355151	101 133351	136 313331	171 315131	206 115531
32 515551	67 315111	102 113511	137 333351	172 115351	207 511151
33 535131	68 313511	103 513531	138 513151	173 133331	208 153551
34 313151	69 151351	104 113331	139 535511	174 315551	209 555311



Corbin AUE 1-700

210	135311	276	553133	342	155353	355	131553	368	511553	381	133113
211	133511	277	151333	343	335133	356	353313	369	313313	382	113513
212	553311	278	533513	344	531153	357	351133	370	335513	383	353133
213	131331	279	513513	345	315533	358	155513	371	135133	384	335553
214	315331	280	151113	346	315153	359	551333	372	533313	385	351553
215	115151	281	331153	347	151133	360	551113	373	115313	386	115353
216	511531	282	113313	348	333553	361	531533	374	331533	387	35533
217	113331	283	335533	349	133513	362	335153	375	513553	388	131513
218	355111	284	315333	350	153553	363	153513	376	353333	389	311313
219	553551	285	553353	351	553113	364	131313	377	513353	390	555513
220	313131	286	533333	352	553153	365	515553	378	511113	391	331333
221	131531	287	355333	353	135153	366	351513	379	351153	392	311353
222	335151	288	353553	354	351313	367	311513	380	553513	393	551313
223	513551	289	135533								
224	313111	290	515353								
225	511311	291	531113								
226	113351	292	131353								
227	133531	293	151313								
228	351351	294	311153								
229	353311	295	133313								
230	315511	296	553533								
231	531111	297	113553								
232	113333	298	531553								
233	535313	299	511313								
234	153333	300 135113									
235	151153	301	115533								
236	313513	302	333513								
237	353113	303	555133								
238	115153	304	153113								
239	155333	305	533353								
240	535353	306	555333								
241	155113	307	313153								
242	335333	308	135333								
243	555353	309	113113								
244	511133	310	511533								
245	155133	311	131533								
246	511333	312	535533								
247	533533	313	335113								
248	515133	314	551353								
249	355513	315	333113								
250	135353	316	133153								
251	555153	317	135553								
252	555313	318	113533								
253	115133	319	531133								
254	353533	320	351113								
255	315513	321	115113								
256	513333	322	151353								
257	531513	323	551553								
258	331113	324	133333								
259	151513	325	551133								
260	153133	326	533133								
261	353513	327	313133								
262	113353	328	515333								
263	131133	329	355113								
264	551153	330	313353								
265	535333	331	553553								
266	535513	332	115553								
267	333313	333	155153								
268	133133	334	151553								
269	555113	335	355353								
270	131153	336	511353								
271	311133	337	513153								
272	115333	338	515113								
273	533553	339	153153								
274	351333	340	355133								
275	111553	341	331513								



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394 355153	406 513533	418 333533	431 331313	443 535153	509 355135
395 313533	407 313553	419 153533	432 515313	444 535553	510 551335
396 515153	408 535133	420 113133	433 535113	445 515513	511 535515
397 551513	409 153313	421 355313	434 313333	446 353353	512 155315
398 315553	410 313113	422 513313	435 533113	447 315133	513 513155
399 135513	411 315353	423 533153	436 133353	448 351353	514 153355
400 153353	412 311533	424 335353	437 511153	449 115513	515 515135
401 355553	413 111513	426 151333	438 333353	450 333133	516 133135
402 353153	414 133533	427 515533	439 331133	451 311553	517 531135
403 135313	415 315113	428 111353	440 113153	452 331553	518 351355
404 531353	416 551533	429 553313	441 335313	453 555533	519 155155
405 155553	417 133553	430 513133	442 131333	454 511513	520 355555
				455 351533	521 135115
				456 555553	522 335155
				457 155313	523 333135
				458 331353	524 113515
				459 315313	525 511535
				460 333153	526 311155
				461 553333	527 155535
				462 531313	528 313315
				463 155533	529 355335
				464 531333	530 515535
				465 335115	531 133315
				466 153515	532 553515
				467 355155	533 113535
				468 535335	534 333115
				469 555515	535 353535
				470 531315	536 515315
				471 535355	537 553535
				472 113555	538 115535
				473 533515	539 113315
				474 335335	540 315315
				475 513555	541 135335
				476 115155	542 515335
				477 531535	543 133535
				478 511555	544 511315
				479 151335	545 335135
				480 133115	546 355315
				481 135155	547 115335
				482 111315	548 331535
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				487 515155	553 551535
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				495 511515	561 551355
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				497 351315	563 113355
				498 533155	564 551135
				499 551555	565 153535
				500 555115	566 131535
				501 355515	567 531335
				502 155135	568 331355
				503 351135	569 131315
				504 511155	570 315515
				505 155515	571 333315
				506 153115	572 553115
				507 335515	573 111535
				508 135135	574 315355



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575	111355	636	311155
571	333315	637	353335
572	553115	638	313115
573	111535	639	135555
574	315355	640	315155
575	111355	641	513515
576	151135	642	331135
577	511135	643	551155
578	131515	644	533335
579	351155	645	313555
580	131155	646	315115
581	315135	647	353315
582	133515	648	311335
583	535555	649	551515
584	555315	650	331115
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586	131135	652	311355
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588	535135	654	151515
589	353555	655	513535
590	311535	656	111555
591	113335	657	515515
592	115555	658	533315
593	555155	659	351115
594	511355	660	315335
595	353115	661	333535
596	313515	662	111515
597	311135	663	353155
598	153335	664	515355
599	153135	665	155355
600	351535	666	313335
601	355115	667	515115
602	531355	668	313355
603	313155	669	315535
604	335315	670	333335
605	113155	671	511335
606	133335	672	531515
607	135515	673	115355
608	351555	674	335535
609	115315	675	335355
610	513315	676	115135
611	553335	677	551115
612	533135	678	135535
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615	311515	681	531115
616	351515	682	533535
617	553355	683	553155
618	535115	684	535315
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620	551315	686	513135
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622	115115	688	151155
623	135315	689	131555
624	135355	690	515555
625	113115	691	131335
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627	153555	693	333355
628	155115	694	535535
629	351335	695	555335
630	333515	696	553315
631	531155	697	513115
632	153315	698	153155
633	533115	699	331515
634	353135	700	533355
635	331155		

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Secura Key Access Control

by Bob Holland

With the increase in workplace violence, invasion-style robberies, and the ongoing problem of internal theft, more small and medium-sized commercial and industrial customers are adding access control to their security arsenal. Electronic access control allows facility owners to keep their doors locked, allows employees to come and go freely, and helps to reduce or eliminate the need for security guards. In the event of employee termination or the loss or theft of an access card, access control allows immediate removal of one person from the system without affecting others. It also provides accountability, by allowing the connection of a PC or printer to produce a list of every card that was

recently used at a given door (see Photograph 1).

Smaller Customers Keep it Simple

Locksmiths can now meet the needs of small-to-medium sized customers by installing one or more single-door access units. Smaller companies may only need transaction history (printouts) from a single reader, following an incident, rather than continuous system wide monitoring. Many stand alone units allow a PC or printer to be plugged directly into the access unit to program or collect history, eliminating the need to run cable to a central location.



are self-contained, easy to install, maintenance-free, and they do not require connection to control panels or complex networks. Secura Key's products are weather-resistant, and operate in a wide range of temperatures and conditions.

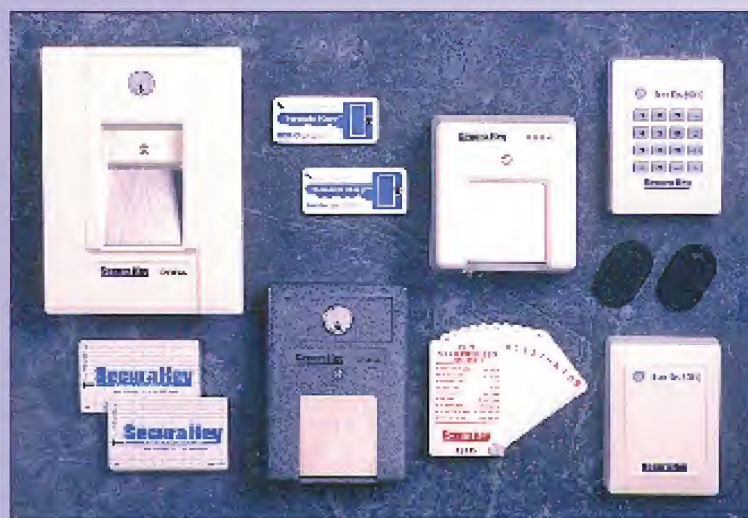
Radio Key 600 Proximity

Radio Key 600 is the newest addition to Secura Key's access control product line. It is a compact, stand alone proximity access control unit that can be used for any application for up to 600 users. Convenient RF Proximity Technology allows the key tags to be read from up to 6 inches away from the reader (see Photograph 2).

The Radio Key 600 emits a constant low-power RF signal. When a key tag is held within range of the reader, it draws power from the reader, and transmits a unique ID number back to the reader. If that ID number has been programmed into the access unit's memory, a relay is activated, unlocking the controlled door or gate.

The key tags are durable ABS plastic, do not require a battery, and will last indefinitely.

Radio Key 600 is surface mounted, self-contained, and includes a medium-range proximity reader, 16-position programming keypad, audible beeper,



1. Secura Key access control offerings. Top row, L-R: ENTRACOMP 28SA Flush Mount access unit; Touch Key(TM) access cards; ENTRACOMP 28SA Surface Mount access unit; Radio Key 600 access unit and key tags. Bottom Row, L-R: Secura Key TOUCH CARD access cards; ENTRACOMP 26SA metal housing access unit; PD-26 Program Deck; Radio Key Auxiliary Reader.

tri-color LED, CPU, memory, and access and alarm shunt relay contacts A 9 Volt DC plug-in power supply is provided.

Auxiliary Reader

The optional Model RKAR Auxiliary Reader can be connected to the RK600 for two-way access control at a single entrance, or for appellations where tampering vandalism, or direct exposure to severe weather are a problem (see Photograph 3).

The RKAR is usually mounted outside the secured area, and the RK600 Unit is mounted inside. The RKAR is a fully-sealed, weatherproof unit, and is very inexpensive. The RKAR is similar in appearance to the RK600, except that it has no keypad. Its antenna, LED, and beeper functions are controlled by the RK600 Unit.

Programming the Radio Key 600

All programming is done from the Radio Key 600 keypad. The unit has 600 available User Numbers, to which random-numbered key tags can be assigned. Key tags can be programmed individually, or in groups. Key tags can be added or deleted either by entering the ID number into the keypad, or by

selecting a user number and holding the tag near the reader. Other keypad commands include setting the access timer, changing the password, and changing the operating mode to inactive (disabled) or continuous open. Non-volatile memory retains all programming in the event of power loss.

To prevent intruders from obtaining access by making random keypad entries, a keypad error alarm is activated after five consecutive incorrect password entry attempts. The unit ignores all keypad input and beeps continuously for 30 seconds as a

tamper alarm. This calls attention to tampering and adds a frustrating delay to any random entry attempts.

Mounting on Metal

Most proximity readers will exhibit slightly reduced reading distance when mounted on a metal surface, because metal absorbs the radiated RF energy. The RK600 will self-calibrate to compensate for the effects of nearby metal. A spacer is also included with each unit to further help restore any reading distance lost due to nearby metal.



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2. The Radio Key 600 in use.

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Power Requirements

When using the 9 Volt DC power supply provided with the unit, a separate power supply should be used for an electric strike or magnetic lock. Alternatively, a larger 12 Volt DC power supply can be used to operate both the RK600 and the door locking device. Several manufacturers offer 12 Volt DC Supplies with battery backup, which will keep the reader and a magnetic lock or DC strike operating during an extended power failure. To determine the proper capacity for the power supply, double the combined current requirements for the RK600 and the door locking device.

Wiring

The RK600 requires two wires from the DC power supply, and two wires to the locking device power circuit. Additional connections for a Request-to-Exit switch and for shunting an external alarm system also require two wires. Use 18-22 AWG stranded, insulated, unshielded wire.

The RKAR connects to the RK600 Unit with two cables: one 2-conductor 22 AWG unshielded cable and one 4-conductor 22-24 AWG shielded cable. These must be separate, non-twisted cables and the shield must be grounded. Maximum cable distance is 30 feet.

Mounting

After wires are run to the reader location, install the RK600 (and RKAR, if required).

1. Use screws to attach the a mounting plate to a single-gang J-Box, wall surface or post.

2. Fasten the housing to the mounting plate with the tamper-proof hex screw.

Basic Configuration

The RK600 is usually located on the outside of the secured entrance. A Request-to-Exit button, or Exit PIR can be installed on the inside, allowing the RK600's access timer to open the strike and shunt the alarm.

Mounting the RK600 with RKAR Auxiliary Reader

Mount the Auxiliary Reader outside the secured area, and mount the RK600 inside the secured area, to allow two-way access control for a single passageway. Alternatively, the RK600 can be installed in a concealed location up to 30 feet away (such as in a utility closet).



3. Radio Key Model RKAR Auxiliary Reader and RK600 Access Unit.

For maximum protection against vandalism and weather, the RK600 or RKAR can be concealed by mounting behind a non-metallic surface, such as glass, wood, plastic or masonry. Maximum material thickness should be limited to 2-3 inches, to allow for reading range variations due to nearby structural metal, etc.

Touchcard Products

With Secura Key's patented TOUCH CARD technology, the user



4. Secura Key TOUCH CARD Reader in use.



5. Secura Key SA Series Access Control Units are available with Surface, Flush, or Metal Surface Mount housings.

simply places the card on the stainless steel TOUCH CARD reader plate to obtain access (see Photograph 4). The advantages of such a reader became clear very quickly — the electronics inside the reader are not open to moisture and dust from the environment, and the risk of vandalism is reduced significantly. No more removing quarters, super glue, or popsicle sticks in your card reader slots! No more outdoor card reader failures due to corrosion caused by moisture entering through the card slot. The TOUCH CARD reader eliminates all these problems.

Here are Secura Key's TOUCH CARD Stand Alone Models:

Entracomp 26SA

This self-contained unit is easy to program by using a deck of 15 program cards (labeled "0" thru "9" "*" "valid", "void", "set timer" and "active/inactive"). For example, to program card #105 to be valid, simply place the following cards, in the order shown, on the TOUCH CARD reader plate: 1 - 0 - 5 - VALID. Standard features include 3500 card capacity (1750 when timed Anti-Passback is enabled), non-volatile memory and bulk card programming. No separate control electronics are required.

Entracomp 27SA

The 27SA has all the features of the 26SA, plus transaction storage capacity and 8000 card capacity and communications capability. If the user is concerned about who has been in an area, he simply plugs in a printer,

terminal, or laptop PC into a connector on the bottom of the reader, and downloads up to 2,000 of the most recent transactions.

Entracomp 28SA

The 28SA includes all of the features of the 27SA, plus up to 15 card time zones and one door unlock time zone, 32 holidays, and automatic daylight savings time. The 28SA also allows up to 16000 cards to be programmed for a given number of days or uses. The 28SA also includes capacity for up to 65,000 individual users; stores up to 5,800 transactions, has three inputs, and features hard or soft timed anti-passback.

The ENTRACOMP 26SA, 27SA, and 28SA family of touch card readers can be seen in Photograph 5.

Conclusion

Whether the customer selects Proximity, TOUCH CARD, or one of the other technologies available, modern single-door stand alone access units will make the job easy. Selection of a specific model requires the locksmith to discuss the current and future application with the customer, and to ask questions, such as: "Do you expect to add access control to more doors in the future, and if so how many?" or "Will your card population increase significantly in the future, and if so, by what percentage?" This will also give the locksmith an idea of that customer's future business potential.

For more information on Secura Key call: (818) 882-0020. **TNL**



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Reed Report

Q. Nissan Maxima keyless entry system. What do I do if I don't know the code?

A. The Nissan Maxima has featured a keyless entry system for quite a few years now. The system is controlled by a small keypad located near the outside door handle on the driver's side. Like most keyless entry systems, the Nissan system is set up for two different codes. One code is "hard-wired" into the system at the factory and cannot be changed. The other code is a "personalized" code that is set by the user and can be changed as often as desired.

The personalized code is stored in the memory of the system in much the same way as the radio stations are stored in the car radio. If the battery dies or is disconnected, the personalized code will be lost. The user must enter the hard-wired code into the system to re-enter or change the personalized code. Naturally, many owners lose track of the hard-wired code number over time and suddenly find themselves unable to use their system the first time the battery goes dead.

The hard-wired code number is recorded on a sticker hidden in the vehicle. To program the system for a new personalized code, you must first press "clear," then enter the hard-wired code into the keypad. If the hard-wired code has been entered properly, the keypad will begin to buzz. At that point, enter the new personalized code into the system while the buzzer is sounding. When the buzzer stops, the code that you have entered will become the new personalized code number. The new code must contain at least five digits and must be completely entered before the buzzer stops. If you make a mistake, just press "clear" and re-enter the hard wired code to start over.

The location of the sticker varies according to the year of the vehicle. The older Maxima models have the sticker attached to an electronic module mounted on the underside of the rear package shelf near the center. On these models, the code will start with the prefix "F." On the new models, the sticker is located on the underside of the glove compartment and begins with the prefix "S". You can only see this type of sticker by looking upward from below the dash. Each hard-wired code has seven digits, not counting the letter prefix. The letter prefix is not a part of the code number.



Yours For Better Security,

Bill Reed

Bill Reed

Scatter Shooting while wondering whatever happened to . . . Russ Hawe

Q. I am looking for a Hudson Code Book unsuccessfully. Can you help?

A. You are probably looking for the book titled "Hudson Code Book third edition." I believe the cost is \$29.95 and most distributors carry it.


Q. What does "spacing and depth" actually refer to?

A. Spacing of a key refers to the dimensions from the shoulder of the key to the center of the first cut and each successive cut. Depth refers to the measurement from the bottom of the key (or the root) to the bottom dead-center of each cut.

Q. What is the difference between "biaxial" and the standard Medeco?

A. The locking system is basically the same. The big difference is the construction of the pins, the stack height, the number of top pins, and the angular cuts on the key. This causes greater picking resistance and creates a greater number of keying possibilities.

Q. What is a dumping block?

A. A dumping block dumps and holds pins and springs from dozens of cores made my Best, Falcon, Eagle, and Arrow. The block allows the removal of the entire pin stack, and at the same time leaves each pin completely in place on a swing-away tray. 

If you'd like to attend a Bill Reed seminar, choose from the following. For more info, contact Bill directly at (904) 476-2799.

Sept. 7 Chicago, IL

Oct. 18 Minneapolis, MN

Sept. 20 Toronto, Canada

Oct. 25 Indianapolis, IN

Oct. 3, 4 Akron, OH

BUSINESS BRIEFS

Security Lock is Stocking LCN and Locknetics

LCN 4610/4620 Auto Equalizers are now stocked by Security Lock. These automatic operators conform to the ADA Act and major building codes by combining a control system with a heavy duty pneumatically or electrically assisted door closer, thus providing easy access for the disabled.



The Locknetics PowerStrike, called the "all purpose" strike, is also carried by Security Lock Distributors. It is considered the most universal strike on the market, designed to be compatible with virtually every cylindrical and mortise lockset.



For additional information call: 617-444-1155, 800-847-5625.

Mas-Hamilton's Cencon System 2000 and X-07 Honored by Smithsonian Institution

Two of the Mas-Hamilton Group highly successful product lines - the X07 and the Cencon System 2000 - were included by formal introduction into the Smithsonian Institution's Permanent Research Collection of Information Technology Innovation on June 10, 1997.

Founded in 1846, the Smithsonian Institution is dedicated to the creation and

application of knowledge for the betterment of mankind. The products submitted in the Business & Related Services category on behalf of Mas-Hamilton Group, will enrich the Smithsonian's growing collection on the Information Age, one of the most important collections of its kind in the world.

SecureX Americas Safes Receive UL Approval

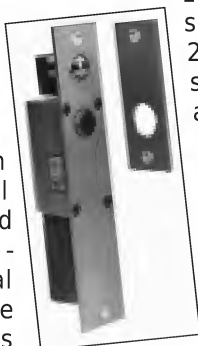
SecureX Americas line of TL-15 and TL-30 composite safes manufactured in Canada, has received UL approval at Northbrook, IL.

The TL-30 incorporates a total of 1" of steel in its 3" composite door, encasing a high density agglomerate with steel fiber, and 1/2" of a special hardened steel alloy (Hardex 500). This material is rated at 184,000 psi versus 120,000 psi for manganese.

For more information on products and pricing call (800) 813-8462; E-mail: securex@total.net.

SDC Electronic Bolt Lock

The complete line of SDC Electronic Bolt Locks is now available at Access Hardware Supply, formerly known as Acme Security. The fail-safe 100 and 1000 series and the 200 and 2000 series are available for either concealed or surface mount applications. The complete SDC electric bolt line has 19 models available to meet virtually any application need that is compatible with access control system of your choice.



For additional information please contact AHS at: 800-348-2263. Fax: 800-435-8233.

High Security Lock Manufacturers Council

The inaugural meeting of the High Security Lock Manufacturers Council (HSLMC) was held at the Arrow/ASSA/Abloy factory in Brooklyn, NY on April 28, 1997. It was decided at the meeting to form a non-profit trade association in

4. Drive these products through the retail locksmith channel.

The initial meeting was extremely positive from the standpoint that all companies involved agreed on the concept in principle. Everyone felt that the market share of high security locks in North America is much too small, and that steps need to be taken to increase awareness and exposure at the consumer level.

The next meeting will be held on July 30, in Reno, NV just prior to the ALOA trade show. At that time, a mission



statement will be chosen, and specific tasks will be assigned to each member. Washington, DC under the aforementioned name. Attendees were: Front Row L to R: Rich Lang, Arrow; Issac Stern, Mul-T-Lock; Satu Roppanen, Abloy; Dave Bryant, Medeco; Jeff Haversat, Sargent.

Back Row - L to R: Brian Hundertmark, Roberts & Hundertmark; Mike Crowder, ASSA; Michael Pennachio, Mul-T-Lock; Henrik Hall, Arrow/ASSA/Abloy; Richard Malekos, Dom; Jim Keane, Schlage

Not Pictured: John Bergstrom, Kaba.

Elected officers were: Mike Crowder, President; Dave Bryant, Treasurer; and Satu Roppanen, Secretary.

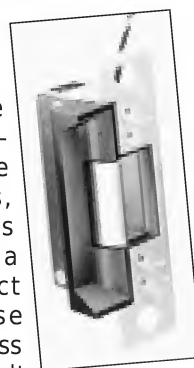
The purpose of this council is to:

1. Increase the awareness of insurance companies of the benefits of high security locks.
2. Promote high security locks, through the insurance companies, to consumers.
3. Create identifying levels of high security locks.

statement will be chosen, and specific tasks will be assigned to each member.

Access Hardware Supply Offers Adams Rite Electric Strikes

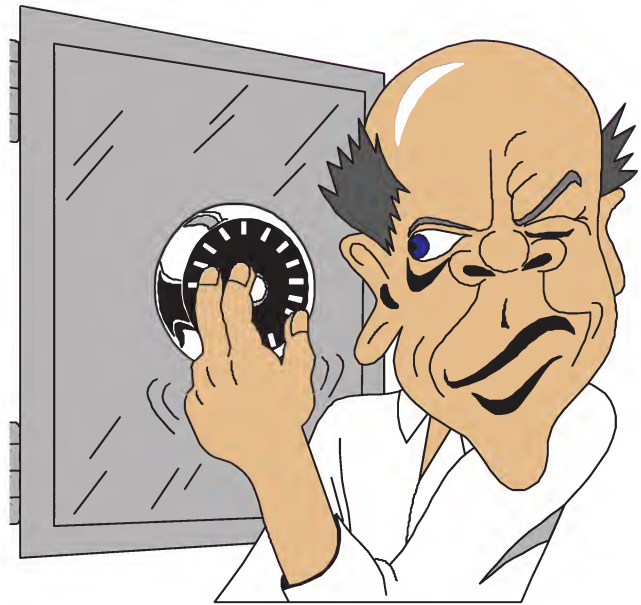
A new series of electric strikes from Adams Rite Manufacturing Co., offers the convenience of easy field conversion from fail-safe to fail-secure and vice-versa. The new strikes, called series 7100, feature a very compact diecast case and a stainless steel latch bolt jaw that can withstand up to 2000 lbs. force. They are offered in AC or DC models for 12, 16 and 24 volt circuits. Variations for easy installation in aluminum, wood and hollow steel are available as are various finishes in aluminum, brass, bronze and chromed steel. For more information call: 1-800-348-2263. 





Opening Slaymaker's Vault

by Jake Jakubowski



In October of 1994, Tom Gallian and I took a trip to Lancaster, PA to meet with Pete Markert, who at one time was the plant manager of the old Slaymaker Lock Co., until 1972. Pete was going to take Tom and I on a tour of the old factory. Tom was hoping that he might be able to pick up something interesting for his padlock collection. I went along for the ride and with the hopes that I might get a story to write. Nearly two years later and

several trips (for other research) to Lancaster, I've got the story.

The Slaymaker padlock factory was started by S. R. Slaymaker and his brother-in-law, John Barry in 1888. From that time, until it was officially closed in 1986 the Slaymaker marquee appeared on padlocks, bike locks, spare tire locks, architectural hardware, rifle grenades, mortar rounds and more padlocks. At one time, Slaymaker was the world's largest producer of railroad switch locks and through his affiliation with Frank W. Woolworth, sold millions upon millions of economical padlocks to the American consumer. In fact, I have a photograph in my collection of Slaymaker, Woolworth and other

dignitaries unlocking Slaymaker's 100,000,000 padlock!

While touring the new office building (which is now used as a private school) which was built in 1924 by Walter T. Fraim - who owned the company for about ten years, until S. R. Slaymaker repurchased the company - we came upon a locked vault (see Photograph 1). Not only was the vault locked, no-one knew the combination! Not only didn't anyone know the combination - no one knew when the vault had last been opened!

I looked at Tom and I swear, there was a slight sheen of perspiration on his forehead and his eyes had this far-away look. I mean, here was a challenge my friend just couldn't pass up! He was hooked on visions of padlocks, drawings and catalogs that had not seen the light of day for possibly decades! So, right then and there, Tom and I committed to opening that vault for the owners

provided we kept any plans, prototypes, padlocks or miscellaneous goodies that we found once the vault was open! The current owners would, in turn, get the vault opened, repaired and in working condition. They agreed!



1. Slaymaker's vault, which hadn't been opened in at least ten years.



2. The handle is reminiscent of an old American vault; the acorn hinge says MacNeal-Urban and the star opening index indicates S&G.



There was no name on the vault to help identify it, but we were able to determine the type of lock on the door which was a Sargent and Greenleaf. However, we could not at that time pin down the model of the lock which turned out to be a 6821. The inscription on the face of the dial says: "Sargent and Greenleaf, Co., Rochester, NY U.S.A."

In Photograph 2, you can see the resemblance of the handle to an old American safe or vault handle and the acorn on the hinge reminds me of a MacNeal-Urban. The star over the index mark on the dial ring is typically S&G, but that and the name on the face of the dial are the only points of identification on the vault - period! However, that was enough to point Tom in the right direction.

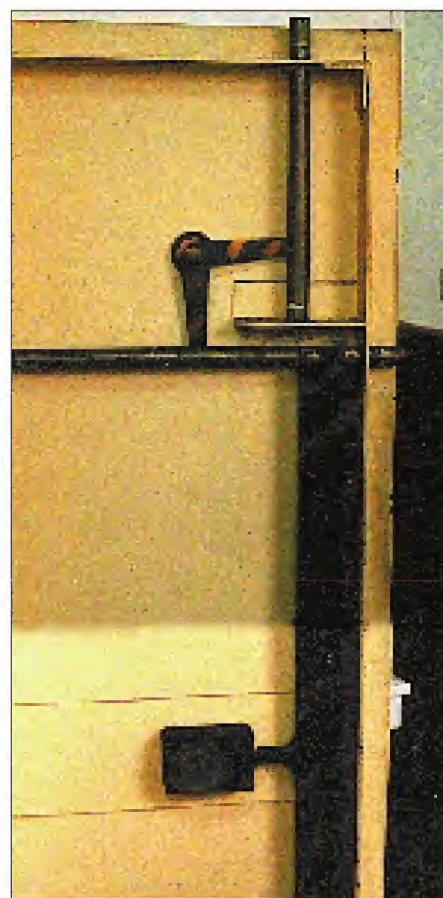
Photograph 3, shows the location of our drill point. A hole was penetrated through the lock mounting plate and lock case in less than two minutes! And, it was right on the money! With Tom's Halogen scope, looking at the wheel pack was like walking down Main St., U.S.A.! We had the door unlocked in under ten minutes from the time we started drilling. But, it took nearly that long to



3. The drill location just outside the dial ring was a perfect choice.

free the door from the "paint seal" that was around it so we could actually open the door.

The door on this vault was twenty-six inches wide and seventy-two inches high, which seemed somewhat narrow to me. The mild-steel door was three eighths of an inch thick and the plate that the lock was mounted on was the same. There were no relockers (internal or external) on



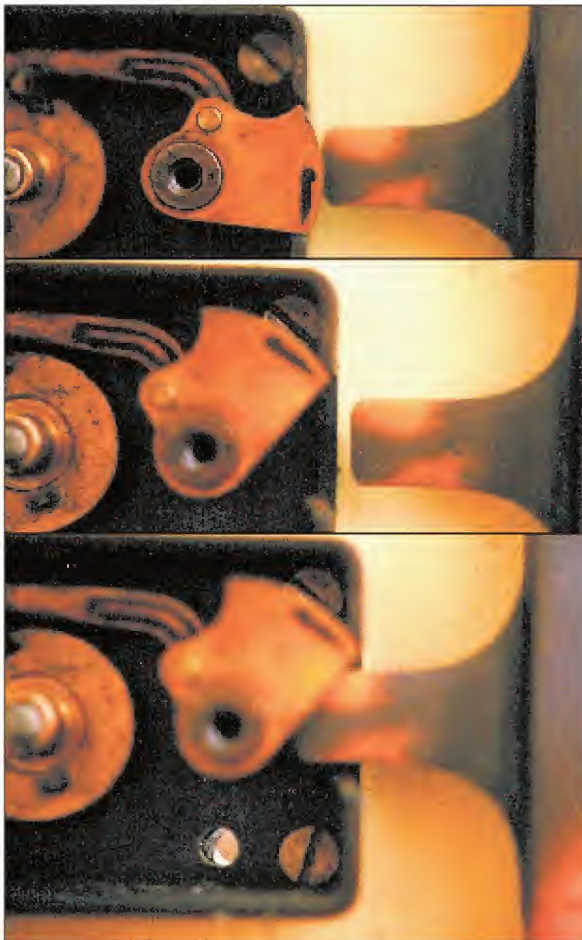
4. Inside the vault door showing the vertical and horizontal bolts.

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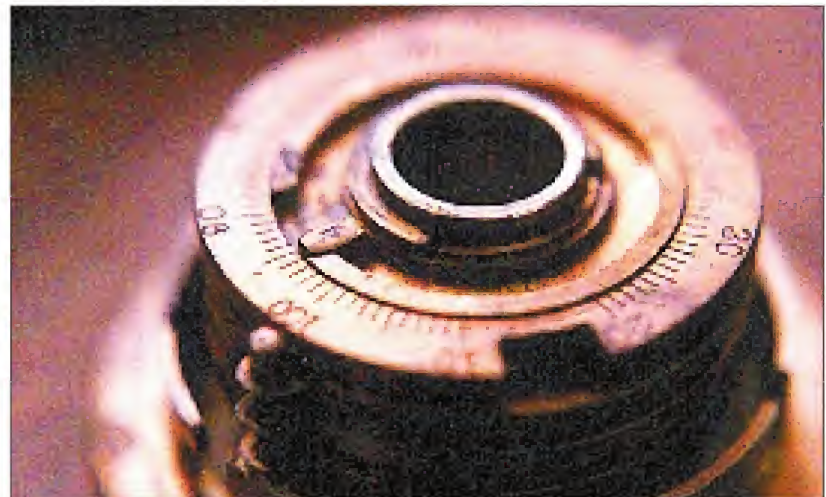


5. The 6821 S&G lock is a roller bolt which when opened, allows the carry bar to enter the lock case.

the lock or the door. Interestingly enough, the walls to the vault were nearly two foot thick and the "shaft" of the vault went nearly to the roofline of the building.

Photograph 4, shows the inside of the vault door, the carry-bar, bolt-works and the bell-crank that operates the vertical bolt at the top of the door. There was an identical arrangement on the bottom.

Photograph 5, shows the lockcase with the back cover removed. Looking from the top to the bottom, you can see the roller bolt and the blocking bar in the locked position. The roller bolt in the unlocked position with the blocking



6. The four wheel wheelpack is mounted on a curb post and held in place with a "C" clip.



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bar still locked. And, finally, at the bottom, the roller bolt in the unlocked position and the blocking bar and carry bar retracted. In the lower right hand corner of the lock you can see our "right-on-the-money" scope hole.

Amazingly, when the wheel pack was taken apart for servicing (after no one knows how many years, if ever) there were no signs of undue wear or stress and, when re-assembled, it worked just dandy (see Photograph 6). Not bad for a 70-plus year old lock. Especially one that had not be used in at least ten years!

The entire opening and repair - including the time necessary to photograph the event - took just a shade over an hour.

What did Tom and I get for our troubles? Like I said earlier, the owners agreed that we could have anything - including locks, etc. - that we found pertaining to the Slaymaker Lock Company. There was one Slaymaker padlock key on the floor of the vault! Since I got to write the article, I told Tom he could have the key. We both agreed that it was still a good week-end, a clean opening and a lot of fun. **TNL**



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TEST DRIVE!

There's nothing more frustrating than going out to a job site to service a door, lock or automobile, only to find upon your arrival, that the lock you were going to service is fastened with security screws, and you don't have the proper tool to remove them.

We've all encountered this situation at one time or another. So what do you do? Well, if you're like me, you break out an old screwdriver, or punch and hammer, and try and tap the screw around. Painstakingly and slowly, if your lucky, the screw will eventually come out. Of course, after you've scarred the lock face, smashed your fingers and shouted a few expletives.

But, now what do you do? Now that the screw(s) is mangled and unusable, what do you replace it with? A standard screw! If there was a security screw there in the first place, it was there for a reason. As you can see, removing the screw is just half the battle. There is a company that can solve all your problems however, its called Sentry Security Fasteners Inc.

PRODUCT:

Sentry Security Fasteners specializes in security screws and the tools needed to install and remove. To aid in the removal in such screws, Sentry has recently introduced the SSF-38DX Security Bit Kit. The SSF-38DX has all the most common security bits readily available in one handsome wood case. There are 34 security bits which include 11 Hex allen with pin hole, 2 Phillips with pin hole, 5 Tri-wings, 10 Torx security, and 6 Spanners, to prepare you for nearly every security screw you will encounter. There is also an 8" driver handle, 1/4" male hex to square

SSF-38DX Security Bit Kit

by **Sentry Security
Fasteners Inc.**



easier, resulting in less fatigue of the hand.

adapter and a magnetic power driver bit holder.

The driver bit holder and security bits are held in a walnut case with brass-plated hardware. The walnut case is ruggedly designed with non-removable pinned steel hinges from Stanley, and a steel catch-latch that keeps the case closed tight and snug, preventing an accidental opening.

CRITIQUE:

This is a beautiful kit. The security bits are all Rockwell hardened 58-60 and cover just about any security screw style you should encounter. This kit contains the largest variety of security bits in one case that I am aware of. Sizes range from very small to large in five different security styles.

The driver bit holder features a hallowed handle allowing storage of all your favorite or most used bits. The end also rotates making installation or removal of the security screws much

The solid walnut case is very nicely done. It is custom designed for its purpose, featuring Stanley hinges and clasp which are secured with, what else, but security screws. The top of the case is even engraved with the company logo and the five various styles of security bit drivers.

CONCLUSION:

The SSF-38DX is an excellent product that is the result of locksmith requests for a single kit with a wider variety of tools. When you see the Security Bit Kit, you can tell that Sentry Security Fasteners took the request seriously and assembled a first rate product. The suggested list price is \$95.00.

If you ever have the need for security screws or tools to service, Sentry Security Fasteners is the place to look. For more information contact Sentry Security Fasteners at: 8109 N. University St., Peoria, IL 61612. Phone: (309) 693-2800, Fax: (309) 693-2872. **TNL**

IN SUMMARY:

The SSF-38DX by Sentry Security Fasteners has all the most common security bits readily available in one handsome wood case.

PRICE: \$95.00

TEST DRIVE RESULTS:

An excellent product that is irreplaceable when needed.